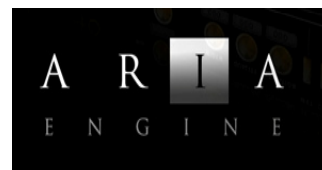# GARRITAN

JABB3

Jazz and Big Band 3

ARIA
ENGINE

www.garritan.com

User's Guide to

GARRITAN
JAZZ & BIG BAND Version 3
Including the ARIA™ Player

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Garritan Jazz & Band

A User's Guide to

GARRITAN
JAZZ & BIG BAND
Version 3—Including the ARIA™ Player

Table of Contents

Welcome to Garritan Jazz & Big Band

Nothing quite captures the experience of listening to jazz. There is something unique and alive about the interaction of the players, the spontaneous improvisation, and the varied styles. Our aims are to give musicians the tools to play jazz and big band music, to provide information about jazz and big band music to as many people as possible, and to promote and encourage jazz and big band music everywhere.

Garritan Jazz & Big Band is the first library of its kind. No sampled library of Jazz and Big Band had existed prior to Garritan Jazz & Big Band. We wanted to do something special and produce a new kind of library. Jazz instruments are very expressive, individualistic and the most difficult to accurately sample. New computing and sampling technology now makes this possible.

I would like to take this opportunity to thank all of the individuals who contributed to this project and made it possible to provide these sounds and tools for musicians. I would particularly like to thank Tom Hopkins who has recorded, performed and programmed much of this library. Tom brings over thirty-five years of professional jazz experience and this product certainly demonstrates Tom's mastery and musicality.

Garritan Jazz and Big Band is a dynamic library that will evolve and grow. Please check our website at www.garritan.com for the latest up-to-date information downloads, updates, FAQs, troubleshooting, helpful hints and tutorials. It is my hope that this Jazz and Big Band collection will enable you to make great music that enriches your life.

Gary Garritan

Garritan Jazz & Big Band At-a-Glance

Thank you for choosing Garritan Jazz & Big Band. The following list presents some of the outstanding features of the Garritan Jazz and Big Band library:

- **The First Jazz and Big Band Sample Library**—Garritan Jazz & Big Band was the very first sample library devoted to Jazz & Big Band. It is unique in the industry. Garritan Jazz & Big Band is used in many jazz curriculums and is the recipient of major industry awards.

- **A Comprehensive Jazz and Big Band collection**—Garritan Jazz & Big Band puts at your fingertips a complete sample library of Jazz and Big Band instruments along with the integrated ARIA sample player. It provides all the major instruments you need for your jazz and big band arrangements.

- **A High-Quality Jazz Instrument collection**—The jazz and big band library contains over 60 instruments including sixteen different saxophones, brass instruments with various mutes, a Steinway® piano, guitars, acoustic and electric basses, electric piano, organs, drum kits and other instruments.

- **No Sampler Required**—The entire Jazz & Big Band library is integrated into the ARIA Player and works as a software musical instrument. No need to purchase a separate sampler.

- **Ensemble Making**—Garritan Jazz & Big Band provides the instruments you need to build your own bands. This ensemble making is a key to realistic performances. You can build your jazz ensembles and big bands one instrument at a time exactly as you wish. It lets you create solos, duos, jazz trios, quartets, jazz ensembles, or a full big band.

- **Intuitive Controls**—The controls in Garritan Jazz & Big Band are streamlined and standardized, so you can quickly become familiar with the library. Advanced functions, such as tongue/slur, fall-offs, doits, growls, and shakes are easily accessible for realistic results with minimal effort.

- **Notation Integration to Play from the Score**—You can create great-sounding jazz and big band sounds directly from the score of major notation programs. Check your notation program for integrated support for the Garritan Jazz & Big Band library.

- **Universal Format**—Supports all popular formats, Mac and PC, as a standalone program or as a plug-in (VST, RTAS, and OSX AudioUnits), and works with supported notation programs. An entire big band can be loaded on a single PC or laptop.

- **Suited for Every Musician**—Professional composers can use this collection for quick big band charts and capturing creative ideas. Hobbyists can use it for adding jazz instrumentation to their tracks. Beginners or students can use it for scoring projects and studying jazz. The instruments in this collection can also be used to supplement Garritan Personal Orchestra.

End User License Agreement

Please read the terms of the following software licensing agreement before using this software. By installing and loading these products on your computer you acknowledge that you have read this license agreement, understand the agreement, and agree to its terms and conditions. If you do not agree to these terms and conditions, do not install or use the sounds contained herein. This is the complete agreement between you and Garritan Corporation that supersedes any other representations or prior agreements, whether oral or in writing.

An important thing to understand is that YOU ARE OBTAINING A LICENSE FOR YOUR USE ONLY—THE SOUNDS DO NOT BELONG TO YOU. The implications are described below. The sounds, samples and programming in the Garritan Jazz & Big Band remain the sole property of Garritan Corp. and are licensed (not sold) to you. There are no refunds once the product is purchased.

What You Can Do: You can use these sounds in recordings, music productions, public performances, and other reasonable musical purposes within musical compositions. You can use these sounds in your own musical compositions as much as you like without any need to pay Garritan Corporation or obtain further permission. If you do use these sounds, we ask that in any written materials or credits accompanying your music that utilizes material from the Garritan Jazz & Big Band (CD booklet, film credits, etc.), that you include the following courtesy credits: *"Instrument samples used in this recording are from the Garritan Jazz & Big Band"*—or a similar credit where practicable. You are allowed a maximum of four (4) installations per purchase.

What You Cannot Do: The enclosed sounds cannot be re-used in any commercial sample library or competitive product. You are absolutely forbidden to duplicate, copy, distribute, transfer, upload, download, trade or loan this software or any of the contents in any way to anyone. You cannot redistribute this product in whole or in part through an archive, collection, through the Internet, or a binaries group, newsgroups, or any type of removable media, or through a network. You cannot resell the product without written permission and payment of an additional fee. The sounds and samples contained within this software cannot be edited, modified, digitally altered, re-synthesized or manipulated without direct written consent from Garritan Corporation.

Disclaimers and Conditions: A right to use the Garritan Jazz & Big Band is granted to the original end-user only, and this license is not transferable unless there is written consent from Garritan Corporation and payment of an additional fee. The sounds of the Garritan Jazz & Big Band will only work with the bundled Garritan ARIA Player and will not work with any other sampler. Licensor will not be responsible if the content of this disc does not fit the particular purpose of the Licensee. Please make sure before installing this item that it meets your needs. Information contained herein is subject to change without notice and does not represent a commitment on the part of Garritan Corporation. The sounds are licensed "as is" without warranties of any kind. Neither Garritan Corporation nor any agent or distributor can be held responsible for any direct or indirect or consequential loss arising from the use of this product in whatever form. The Aria Engine is covered by the installer's End User License Agreement and is incorporated by reference. The Garritan Jazz & Big Band may not be returned for any reason other than manufacturing defects. The terms of this license shall be construed in accordance with the substantive laws of the United States of America and the State of Washington. The user agrees to read the manual before seeking technical support and to make sure his or her system meets or exceeds the recommended requirements.

What This Package Includes

This Jazz & Big Band library includes the following:

- Download file in compressed form (or 1 DVD in the boxed version) containing the complete Jazz & Big Band software and the integrated ARIA Advanced Instrument Engine.
- A unique serial number so that you can register the product. Don't lose this—store it in a safe place!
- A PDF Manual and a Getting Started Guide

Before you begin installation, make sure you have read the End User Licensing Agreement in the pages that follow. By installing the software you are indicating you agree to the terms of the license.

How to Use This Manual

The goal of this manual is to help you learn how to use Garritan Jazz & Big Band. Although many dislike reading manuals, if you wish to get the most out of this new library it is absolutely essential to read this manual. Doing so will help you understand how to use this software library. The operation of many of the essential features is not obvious in casual use and we realize many users are not music technologists. We'll do our best to make this easy for you in this manual and to provide information about the various instruments, playing techniques and modes of control. And, of course, by no means can playing jazz or performance technique be taught from this or any other manual.

You can refer to this manual whenever you wish. This manual is provided in digital form as an Adobe Acrobat document file (also known as a PDF) which can be viewed on a computer monitor or printed. If you do not have the Adobe Acrobat Reader, it is available free from **www.adobe.com**. A digital manual is eco-friendly and can be easily updated. If you have a need to have a paper copy, you can print this document. A printed copy can be a handy reference.

The easiest way of obtaining the information you seek is to use the Bookmarks pane along the left side of this PDF document. By opening the Bookmarks pane, you can go to the various topics from the section names. With a PDF document, you can also zoom in to make the page larger to see more details, or zoom out to see multiple pages at once.

Further Documentation and Resources

For the latest information including updated documentation, visit our support pages at: www.garritan.com. There you can find updated information provided after the manual was written, corrections or additions to this manual, FAQ pages answering common questions suggestions from the users of Garritan software, and news about upcoming Garritan releases. You can also visit the Garritan Forums for up-to-date information. The address is: www.garritan.com/forums. Please send any reports of errors in this manual or suggestions for improvement to **info@garritan.com**.

Specifications & Computer System Requirements

The following table lists the computer and hardware requirements for using the Garritan Jazz & Big Band. You can use the Garritan Jazz & Big Band on most any modern personal computer that meets the specifications listed below. The specifications provide the minimum standards. For optimal functioning, it is recommended you have a powerful enough computer with a fast processor (Core 2 Duo or more recommended), a fast hard drive and a large amount of RAM. The powerful and complex algorithms of the ARIA Player work best on modern computers. We think that's a small price to pay for the results you will get. Please also observe the system requirements of your host application, notation program and/or sequencing program if applicable. See the Garritan forum or website if you are looking for recommendations or more information.

Computer System Requirementsts		
Computer	*Operating System*	*Hardware*
Windows PC	Microsoft Windows XP (SP2 or SP3 recommended) Microsoft Windows Vista 32 Microsoft Windows Vista 64	• 2.8 Ghz CPU Pentium 4 or better, 2.0 Ghz Core 2 Duo or better recommended • 1 GB Minimum, 2 GB RAM recommended to play the entire orchestra. There is a direct correlation between the number of instruments that can be loaded and the amount of available RAM. • 3.5 GB of free hard drive space • Hard drive speed of at least 7200 RPM preferred • Internet connection for download version, DVD ROM drive required for boxed version installation • Monitor with 1,024x768 resolution or better • A sound card compatible with ASIO, DirectSound, or MME • Keyboard: A MIDI interface may be required if you are using a MIDI keyboard. Some keyboards use USB. The Mod Wheel on the keyboard controls volume so make sure to move it up to an audible level. If you do not have a Mod Wheel, then have the ability to assign the controller within your notation program or sequencer or to an external controller. • High quality speakers and amplifier, or high quality headphones • Internet connection for download, updates, and online registration
Mac	Mac OS X 10.4 minimum (universal binary minimum)	• Mac Intel; 2.8 Ghz CPU Pentium 4 or better, 2.0 Ghz Core 2 Duo or better recommended • 2 GB RAM recommended to play the entire orchestra. There is a direct correlation between the number of instruments that can be loaded and the amount of available RAM. • 3.5 GB of free hard drive space • Hard drive speed of at least 7200 RPM preferred • Internet connection for download version, DVD ROM drive required for boxed version installation • Monitor with 1,024x768 resolution or better • A sound card compatible with Core Audio • A MIDI interface may be required if you are using a MIDI keyboard. Some keyboards use USB. The Mod Wheel on the keyboard controls volume so make sure to move it up to an audible level. If you do not have a Mod Wheel, then have the ability to assign the controller within your notation program or sequencer or to an external controller • High quality speakers and amplifier, or high quality headphones • Internet connection for download, updates, and online registration

The stated requirements represent minimum guidelines for the Standalone Garritan Aria Player. If you are using the Garritan Jazz & Big Band within a host music program, then there may be other additional resource requirements. Please also observe the system requirements of your host application, notation program, and/or sequencing program if applicable. The demands of various other processing software (including the sequencer, audio and effects processors, other plug-ins, and so on) can affect functionality.

Regarding Sound Cards & MIDI Interfaces

The quality of the audio interface will have a significant effect on the quality of the sound you will hear from Garritan Jazz & Big Band. It will also have a substantial effect on performance (both latency and polyphony). Therefore, a good sound card is one of the most important components in optimizing the sound and performance of Garritan Jazz & Big Band.

In theory, any audio or sound interface which the manufacturer supports for your operating system and computer, and which has good drivers—should work. However, you are unlikely to get the best sonic results from a sound card designed for computer games or system sounds. Most computers come with a consumer-grade sound card, and we recommend that you get a good quality sound interface beyond that which is built into your computer. Older SoundBlaster sound cards (which do not support multiple sample rates) and gamer-oriented or home system sound cards may be problematic. It is not possible for us to test all built-in or third-party sound cards, and some interfaces do have problems on some platforms; so please see the specifications page on the Garritan website if you are considering buying a new sound card to run Garritan Jazz & Big Band.

Technical Info

A low latency audio interface with ASIO 2.0 (Windows) or WDM/WaveRT, or Core Audio (Mac), drivers is required for Jazz & Big Band to work as a stand-alone program. These drivers are normally installed with the audio interface, or the most recent versions can be acquired from the manufacturer's website. Contact the manufacturer of your interface for more information. The drivers should be set to 24 bit, buffer size 256 samples (optimal) or 512 (more latency, but less CPU load) and 44100Hz Sampling Rate.

Please note:

When Garritan Jazz & Big Band is running as a plug-in, it uses the audio driver selected by the host's setup. If the host (typically your sequencer or notation program) is set up properly and works well, then the Jazz & Big Band plug-in should pass through the same audio and MIDI setup. For this information, please refer to your sequencer's, notation program's, or host's manual.

Similarly, any MIDI interface the manufacturer supports for your system should work with Garritan Jazz & Big Band.

Regarding Speakers, Amplification and Headphones

Amplifiers and speakers or headphones are needed to listen to the audio output that Garritan Jazz & Big Band produces through the computer's audio or sound card(s).

The quality of the audio amplifiers and speakers is extremely important; there is little point in expending a great deal on high-end computer systems and an audio interface but using inferior personal computer speakers.

Regarding 64-bit Computing

Garritan Jazz & Big Band is 64-bit compatible and takes full advantage of the new 64-bit operating systems, processors and hardware that are now available. The Garritan ARIA Player is also fully 32-bit compatible. At the time of this writing, 64-bit computing is entering the marketplace, but 64-bit hosts, audio and MIDI drivers have not fully penetrated the market. To be true 64-bit the entire audio path must be 64-bit, including sampler, host, operating system, audio and MIDI hardware. As more hosts, operating systems, and hardware become 64-bit enabled, Garritan Jazz & Big Band will work with those 64-bit platforms. Please also consult the Garritan website for further information and updated recommendations.

INSTALLATION

Installing Garritan Jazz & Big Band

Installing Garritan Jazz & Big Band is easy. Before you begin, make sure your system meets or exceeds the system requirements and that there is enough room on your hard drive to contain all the samples. The full installation requires approximately three gigabytes of free hard disk space. Installation involves installing the Jazz & Big Band instrument samples as well as the advanced ARIA instrument engine. A setup program will guide you through the process step-by-step.

> *3 Steps for Installing Garritan Jazz & Big Band 3*
> - **Step 1. ARIA Engine Installation**
> - **Step 2. ARIA Player Installation**
> - **Step 3. JABB Sound Library Installation**

Mac Setup (For Windows Setup see next Section)

- First, make sure your audio and MIDI hardware is set up and working with your computer. Close any programs you are running.
- For the Download version of Jazz & Big Band, the Mac Archive Utility will unpack this to your default downloads directory.
- Double click on MAC_ Garritan_Jazz_and_Big_Band_3.mpkg. Accept the defaults on the installer. For DVD versions of Jazz & Big Band, take the Installation disc out of its case, put it into your DVD drive in the computer and close the drive tray.
- Double click on the DVD icon, then on the installer.
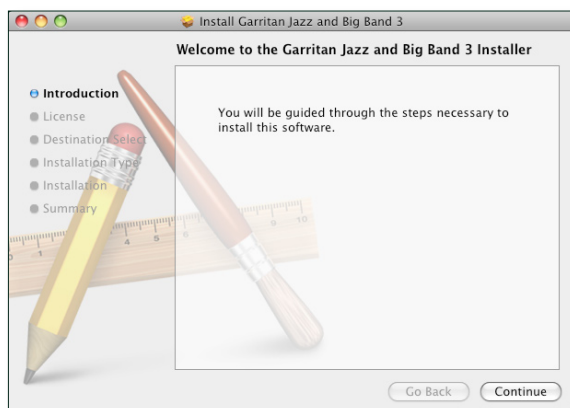
- If the setup screen does not automatically appear: Use the Apple Finder (Mac) to open the installation DVD. For Download users—Double click on MAC_ Garritan_Jazz_and_Big_Band_3.mpkg. then double-click the Installer Icon.
- You will then be asked to fill out your name and to read and accept the End User License Agreement before proceeding with the installation.
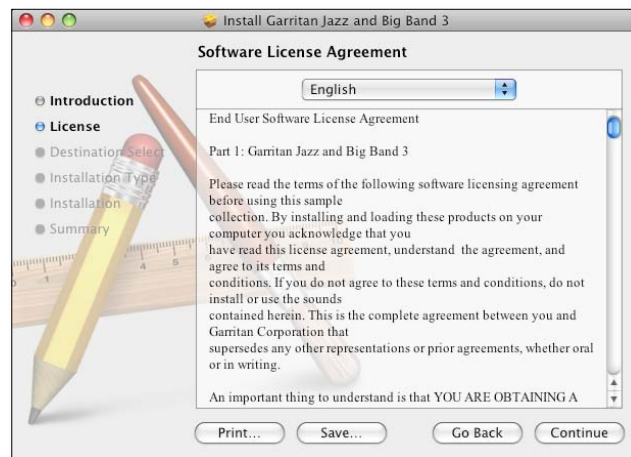
- The setup lets you select which plug-in formats you require. These plug-in formats allow Garritan Jazz & Big Band, in addition to standalone use, to run as a virtual instrument plug-in that seamlessly integrates into your favorite music software program or sequencer (assuming that it accepts such instrument plug-ins). Please refer to the chapter "Using Garritan Jazz & Big Band as an Instrument Plug-In" for further information. The choices are Audio Units, RTAS and VST.
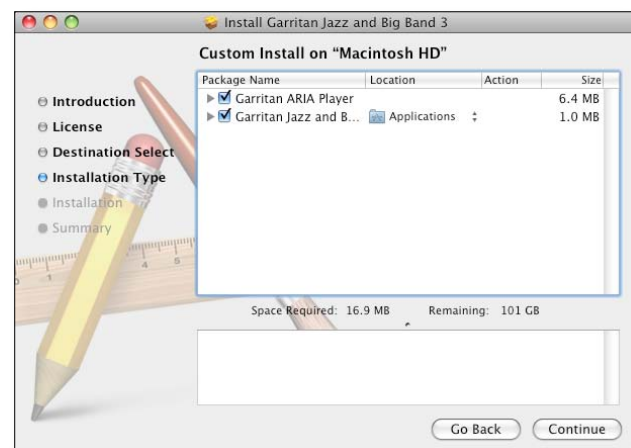
- You can select which folder into which the Garritan Jazz & Big Band application and support files should be installed. For most instances, use the default. If you prefer to install Garritan Jazz & Big Band in a location other than the default, click on "Change Install Location".
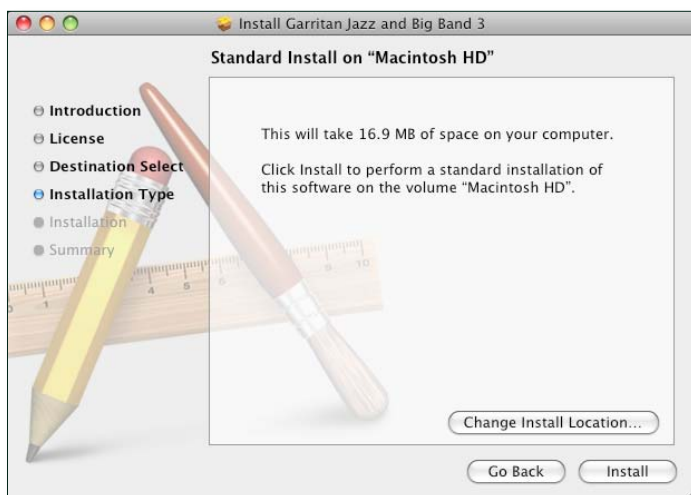
- Setup is now ready to begin installing Garritan Jazz & Big Band. Click on "Install" to begin the installation process. Installing library files is very resource-intensive, and it may take some time to install all the samples.

- After a few moments a dialog box will notify you that the setup wizard has finished installing the Garritan Jazz & Big Band on your computer.
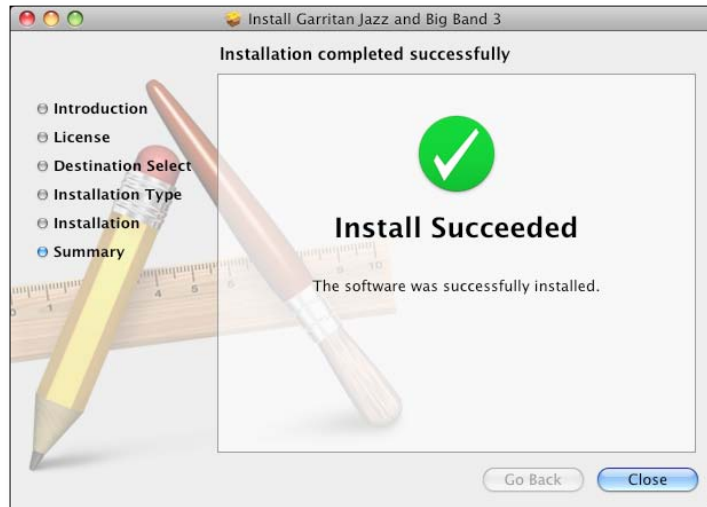
When sample installation is complete, you will need to authorize your current copy of the Garritan Jazz & Big Band. This procedure is described in the next chapter.

When you are finished with installation, remove the disc(s) from your drive and store them in a safe place if you have the DVD version. If you purchased the Download version be sure to make a backup copy. If anything happens to your computer, you can reinstall the Garritan Jazz & Big Band from the discs or the backup.

IMPORTANT!

Please do not cancel setup after installation begins, otherwise a partial, broken installation may result.

Windows Setup

The setup in Windows installs four components:

1. The Garritan **Jazz & Big Band** Setup Wizard
2. The ARIA Engine Installer
3. The ARIA Player Installer
4. The JABB Sound Library Installer

The four component installations will be successive and it is recommended that you just select "Next" for each screen and use the defaults.

- First, make sure your system meets or exceeds the system requirements. See the previous section of this manual for the system requirements. Also ensure that your audio and MIDI hardware is set up and working with your computer.
- Close any programs you are running.
- For the Download version of Jazz & Big Band, after download, unzip by double-clicking WIN_Garritan_ Jazz_and_Big_Band_3.exe. Make sure you fully unzip the entire file. Do not run the EXE file through Windows compressed folder or Winzip directly. In the downloaded zip file you will see these items:
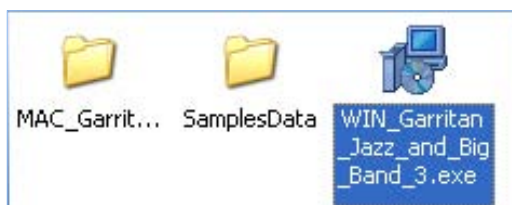
Note:

If unzipping is unsuccessful with the Windows utility, you may want to try Winzip or another free unzipping utility.

1. The Garritan Jazz & Big Band Setup Wizard

- Run WIN_Garritan_ Jazz_and_Big_Band_3.exe from the location where you extracted the files.

  For DVD versions of Jazz & Big Band, take the Installation disc out of the case, place it into your DVD drive in the computer and close the drive tray. You should see a Welcome Screen.

- If the setup screen does not automatically appear: Use Windows Explorer to open the installation DVD, or for Download users WIN_Garritan_ Jazz_and_Big_Band_3.exe. Then start the Sample Manager by double-clicking "Install Jazz & Big Band" setup.exe.
- You will next see an Information screen letting you know if you have other versions of ARIA installed or other Garritan libraries. Click "Next".

- You will also be prompted for the folder into which the Garritan Jazz & Big Band application and support files should be installed and where the shortcuts and icons should be placed. (You will be asked later where you want the samples to be installed.) For most instances, use the default. Unless you have a more sophisticated setup, the default location is recommended. To continue, click "Next".
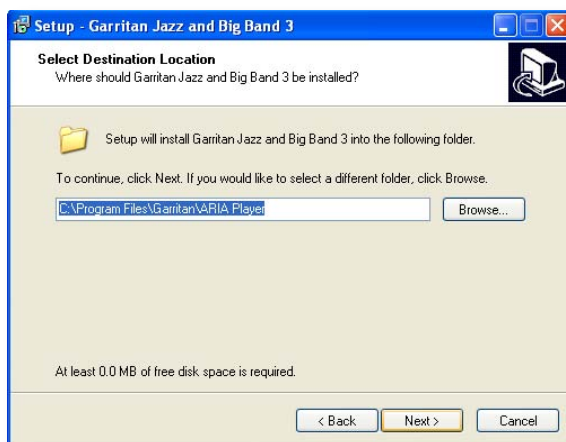
- The setup lets you select which plug-in formats you require. These plug-in formats allow Garritan Jazz & Big Band, in addition to standalone use, to run as a virtual instrument plug-in that seamlessly integrates into your favorite music software program or sequencer (assuming that it accepts such instrument plug-ins). Please refer to the chapter "Using Jazz & Big Band as an Instrument Plug-In" for further information.
  - The choices are VST & RTAS
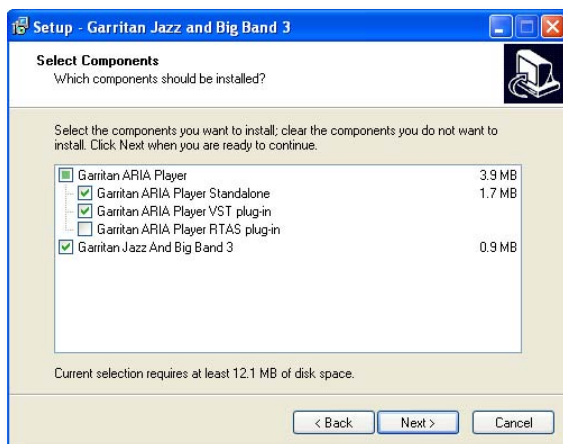
- Setup is now ready to begin installing Garritan Jazz & Big Band. Click on "Install" to begin the installation process. Installing library files is very resource-intensive, and it may take some time to install all the samples.
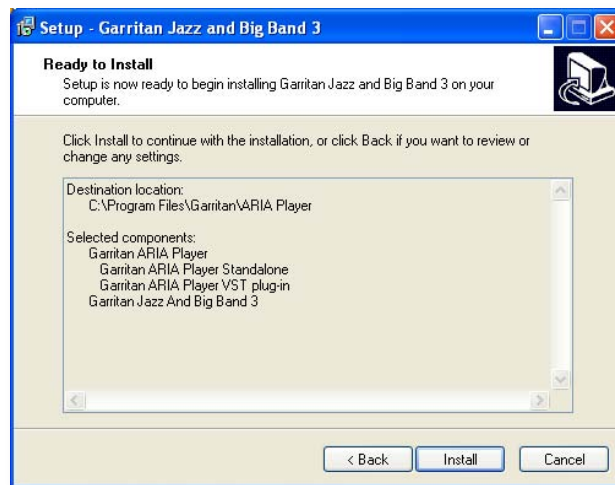
- After a few moments a dialog box will notify you that the setup wizard has finished installing the Garritan Jazz & Big Band Main Installer on your computer.

2. The ARIA Engine Installer

- You will be automatically prompted to install the ARIA Engine Component.

Follow the prompts in the ARIA Engine Setup Wizard (the "Next" button for the Information dialog, License, and Installation). After completion, you will see a screen "Completing the ARIA Engine Setup Wizard. Click "Finish" to exit the ARIA Engine Setup and continue installation.

Note:

If you have Garritan Personal Orchestra 4, ARIA is already installed and this step will automatically update ARIA if it is a later version.

3. The ARIA Player Installer

- After completing the ARIA Engine Installer, you will be automatically prompted to install the ARIA Player.

Follow the prompts and select where you want the program, plug-in component (e.g. Aria Player VST), shortcuts, and icons installed. Setup will then be ready to begin installing the Garritan ARIA Player. Click "Install". After completion, you will see a screen "Completing the ARIA Player Setup Wizard". Click "Finish"to exit the ARIA Player Setup and continue installation.

4. The Garritan Jazz & Big Band Library Installer

- After completing the ARIA Player Installer, you will be automatically prompted to install the Garritan Jazz & Big Band Library sound files. This installs all the SFZ files, banks, and the actual instrument sample files.

Follow the prompts in the Garritan Jazz & Big Band Setup Wizard - the "Next" button for the License Agreement, "Next" for the desired folder destination location, and "Next" for selection of Standard and/or Notation options and the instruments you want to install.
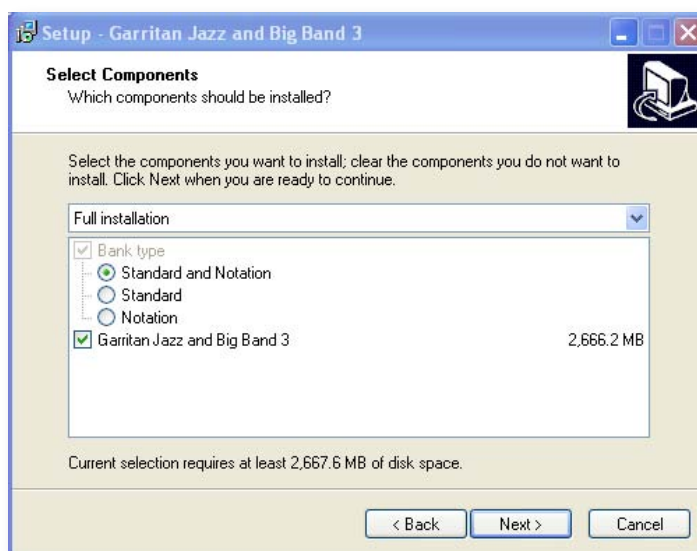
If you use JABB for live play or with a sequencer, choose the "Standard" version. If you use Finale, Sibelius or other supported notation program, select the "Notation" version. Select both if you have both a sequencer and a supported notation program. In case of doubt, install both Standard and Notation (it takes less than 100kb for each). The only reason we make it optional is so that people who only need one type can opt to have only that one type show in the instrument selection tree.

The installer will allow you to select or deselect specific instruments during your installation. Most will choose the default and install all the instruments. Click "Next" to continue.

• You will then be prompted to "Select your Samples Directory". Select the location into which you wish to install Garritan Jazz & Big Band. The default location is recommended for most.
• You will be asked to select a Start Menu folder. The default is recommended. Click "Next" and you are ready to install the samples.
• The instrument sound files will then be copied to your hard drive. You will see screens flash by with status bars for each of the instruments being loaded.
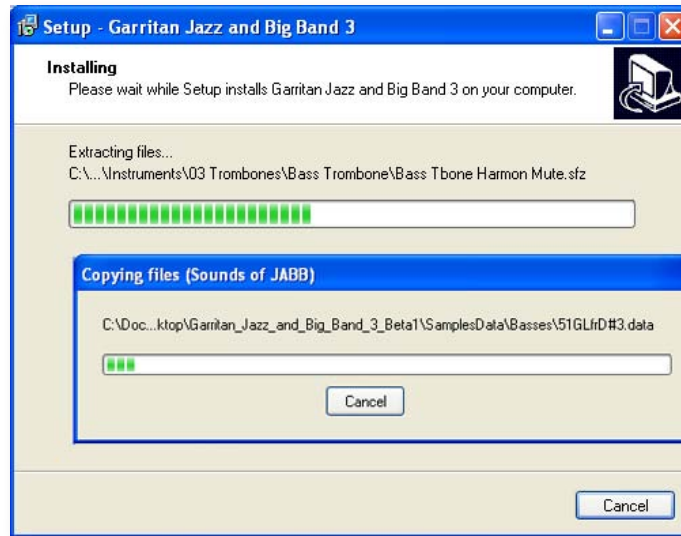
- You will see a final screen indicating that the installation is complete.

Garritan Jazz & Big Band should now be installed. You can verify this by launching Jazz & Big Band.   Once installation is complete and verified, you will need to activate your current copy of Garritan Jazz & Big Band. This procedure is described in the next chapter.

When you are finished with the installation, remove the disc(s) from your drive and store them in a safe place if you have the DVD version. If you purchased the Download version be sure to make

a backup copy of the original file you downloaded. If anything happens to your computer, you can reinstall Garritan Jazz & Big Band from the discs or the backup file.

IMPORTANT!

Please do not cancel setup after installation begins, otherwise a partial, broken installation may result.

ACTIVATION

Activating Garritan Jazz & Big Band

After Garritan Jazz & Big Band is installed you will need to activate it. You will notice that when launching Garritan Jazz & Big Band for the first time, the following pop-up message appears: "Your Jazz & Big Band is not activated. Do you want to start online activation now?"
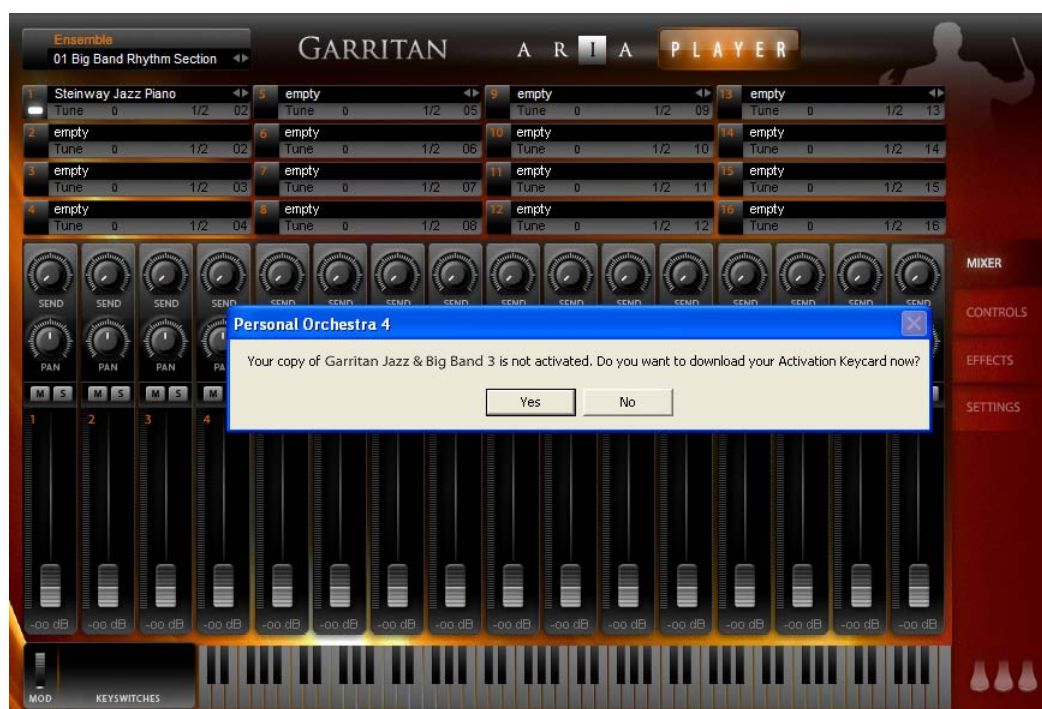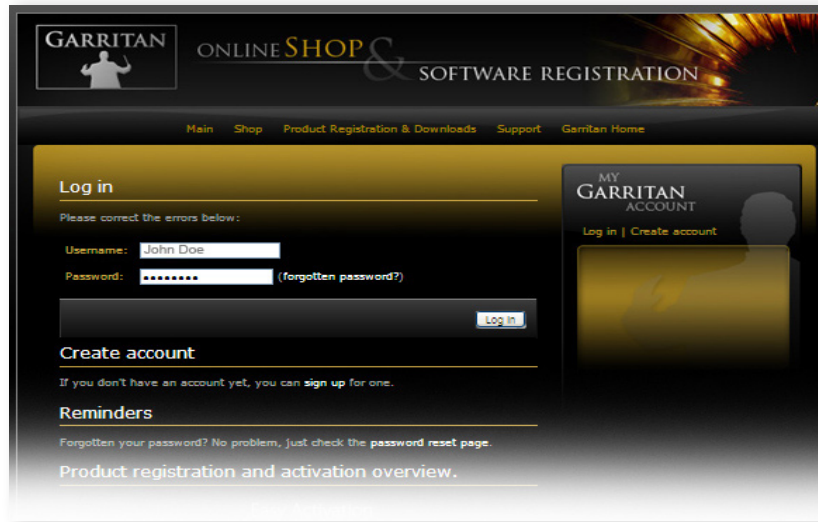
Click "Yes" if this computer has an internet connection and you wish to start the easy activation process. At any time you can open your browser and go to www.garritan.biz to access our registration server. You will be presented with the Log In screen. If this computer does not have an internet connection, you can register your Garritan product with any online computer, and simply copy the "Activation Keycard" to a removable USB drive, or any other method to transfer the Keycard to this computer.

If you ordered or updated online, you will have already created an account. You simply need to Log In and activate with the user name and password you used when you made your purchase. If you ordered a physical boxed product, you will need to create a new account.

Log on to the Garritan Registration Site:
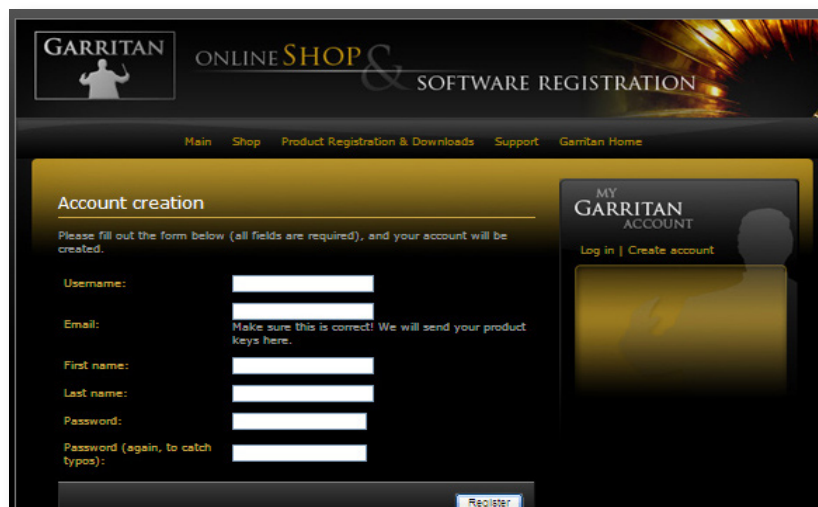
Log on to **www.garritan.biz** and enter the same username and password that you used when you made your purchase (especially Download customers).

- **Creating an Account**

    If you have purchased a boxed product, or have not created an account previously, you need to create an account. You will need to choose a user name and password and enter your email address.

You will then have an opportunity to enter your Profile Details. Once you do this you can amend your details at any time.

Privacy Policy: All personal information will be kept strictly confidential. Your information will not be shared with or divulged to any third parties.

Product Registration: Enter Your Serial Number

You will be asked to enter your serial number in order to register your product.

Where to Find Your Serial Number:

Online Purchases and Updates: If you purchased a product or update online, your serial number will be emailed to you immediately after purchase.

Thank you for shopping at **http://www.garritan.biz**

Please save this email for further reference, it contains the serial numbers of the products you have just bought!

Jazz & Big Band 3: 40000-11111-22222-33333-44444

Note:

If you have not received your serial number via email, please check your spam folder.

Physical Boxed Products: If you purchased a physical boxed product, the Serial Number will be affixed in the DVD case just above the DVD disc.

The Activation Keycard

Once the serial number is entered and you click "Register," an Activation Keycard will be generated in your name. You can now download the "Activation Keycard" for this Garritan product. The Activation Keycard is an image resembling a typical credit card. This image contains your registration and profile details encoded within the Keycard image. It will look like this:

After you have an account and have entered your Serial Number, you will receive an email with your Activation Keycard. The email will contain your keycard as an attachment (.png file) and the message will say:

Dear Customer,

Attached you can find the product activation key for Jazz & Big Band 3.

Please save this email in a safe place, or save the attached product key on your hard drive.

Your Activation Keycard is also available online at any time. Go to "Activation Keycards" under the Registration & Downloads tab and download the Activation Keycard for Garritan Jazz & Big Band.

You can now save the Activation Keycard .png image file to your hard drive (keep it in a safe place). For convenience, we recommend that you initially save the .png file to your desktop.

Final Step: Activating Garritan Jazz & Big Band

Locate the Activation Keycard image where you saved it on your hard drive.

Open the Garritan Jazz & Big Band software application. If you saved the .png file to your desktop or a folder of your choosing, simply click and hold on the file, drag the file icon, or Activation Keycard image, directly onto the JABB ARIA Player application and release.

Drag and Drop the PNG file from the desktop onto the Garritan Jazz & Big Band ARIA Player

Drag and Drop   *PNG file from the Desktop onto the Garritan Jazz & Big Band ARIA Application*
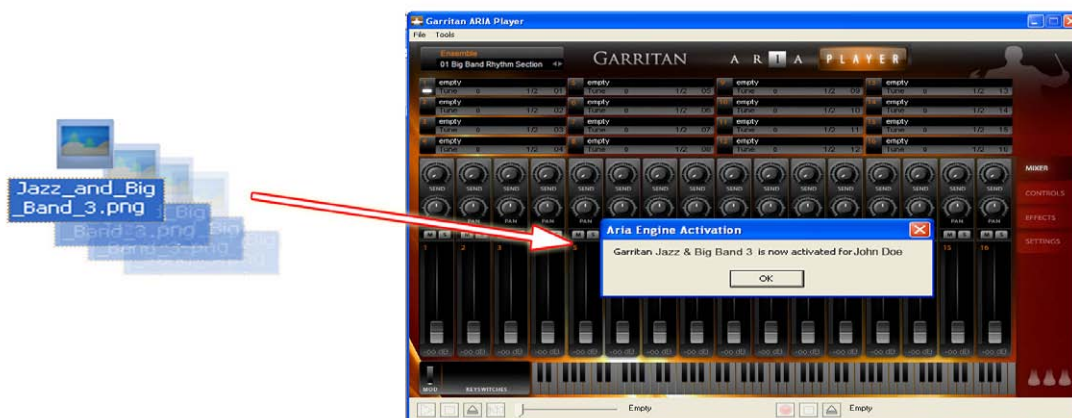
Alternative: Drag and Drop the Activation Keycard: As an alternative, you can also drag the picture from the web page onto the ARIA Player itself, and it will register in most cases. Please note that not all browsers will allow "drag and drop" actions from within the program. This is another reason it is best to save the .png file to your desktop and "drag and drop" it from there.

Drag and Drop   *Card Image from the Registration Server onto the Garritan*
Jazz & Big Band ARIA Application
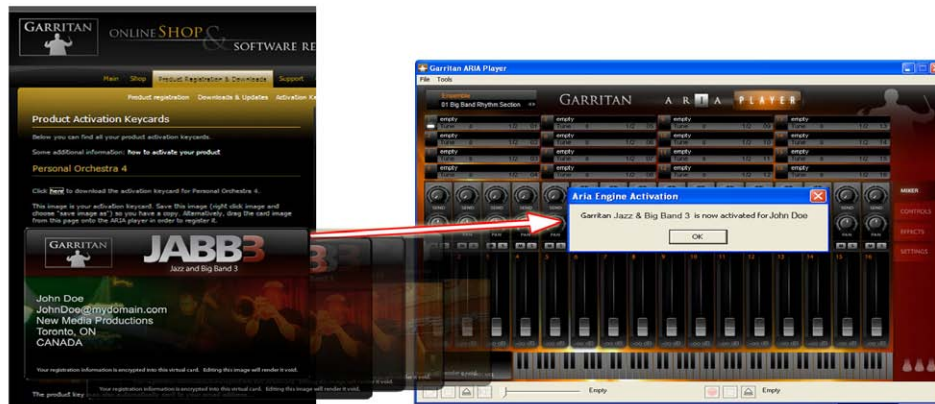
You Are Now Registered and Activated!

The Activation will take place automatically and will bring up the following message: "Garritan Jazz & Big Band is now activated for [*your name*]".
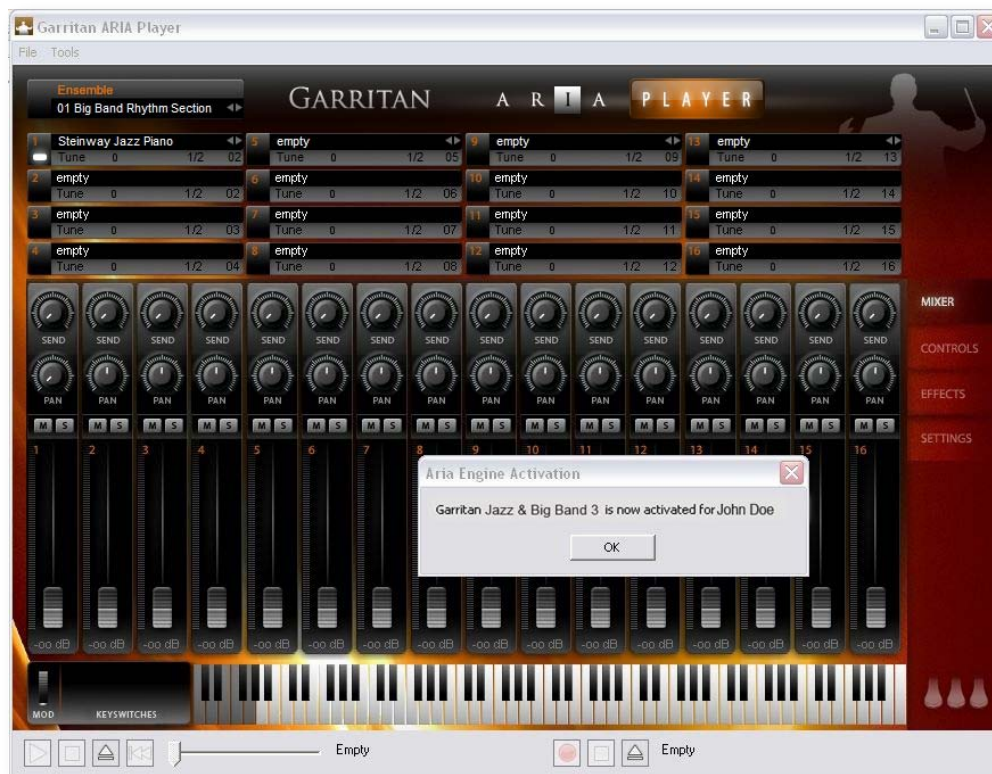
Extremely Important!!

The .png file contains your sensitive, encrypted personal information. Carefully protect this file. DO NOT GIVE THIS FILE TO ANYONE OR DISTRIBUTE IT IN ANY WAY OR YOUR PERSONAL INFORMATION WILL BE COMPROMISED. IF THE FILE BECOMES PUBLIC THE CARD NUMBER WILL BE BLACKLISTED AND THE CARD REVOKED. WE ARE NOT RESPONSIBLE IF YOU GIVE YOUR PERSONAL DETAILS TO A THIRD PARTY. IF THE CARD IS STOLEN, CONTACT US IMMEDIATELY. Without a valid card you will also not be able to obtain critical updates to the program.

Important Note:

You are allowed a maximum of four (4) installations. If you have special circumstances or require additional licensing, please contact us.

Updating to Latest Version:

Be sure to check the Garritan website for any possible updates that have occurred since the time your software was manufactured. Software is frequently updated and a more recent version may be available.

After the library has been installed, it needs to be activated. You are given a 30-day grace period for each library before activation is required, but it is recommended that you activate as soon as possible.

HOW TO USE
GARRITAN JAZZ & BIG BAND

How to Use Garritan Jazz & Big Band

Once installed and authorized, it's time to get started with the Garritan Jazz & Big Band. There are three ways to use the Garritan Jazz & Big Band: you can play it 'live' as a standalone application, as a plug-in within a sequencer, or with a supported notation program.

Playing the Garritan Jazz & Big Band as a Standalone Application ('Live' Play)

Garritan Jazz & Big Band can be launched by itself and played live via the MIDI keyboard or other MIDI controller. The standalone version of the Garritan Jazz & Big Band effectively makes your computer, audio hardware, and MIDI keyboard into a virtual jazz or big band that can be played independently of other programs. This mode is ideal for practicing solo instruments, silent play, and live playing. The limitation is that you can usually play only one instrument at a time. Unlike using it as a plug-in within a sequencer, your recording ability is limited and you cannot edit your performance (though you can use various audio software programs for this).

Launching the Garritan Jazz & Big Band in Standalone Mode

First, make sure that you have followed the instructions in the installation section of this manual. Be certain that your audio/sound interface and MIDI hardware interfaces are properly connected to the computer, your speakers or headphones are connected and everything is powered up.

To launch Garritan Jazz & Big Band as a standalone application, click on the Garritan ARIA logo on your desktop or go to the Program Files or Applications folder and launch Garritan ARIA Player.

Basic Setup Information for Standalone Mode

To use the standalone version you have to configure the Audio and MIDI settings in the Garritan Aria Player dialog box (found in the Tools menu) before you can play. When used as a plug-in, the host sequencer or notation program has already set up its own audio and MIDI connections, and Garritan Jazz & Big Band "plugs in" to them. However, with standalone operation, Garritan Jazz & Big Band communicates directly with your audio and MIDI interface. Setup for Mac and Windows computers is similar, except where indicated. Note that if you change your audio interface, you will almost certainly need to readjust these settings.

Call up the **Preferences** setup dialog from the Tools menu on the Garritan Aria standalone interface. You'll see drop-down menus for MIDI Device, Audio Devices, Stereo Pair, Sample Rate and Buffer Size.
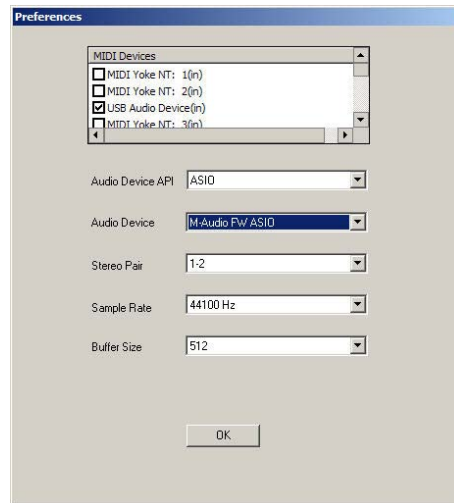
- **MIDI Device Menu:** All supported (and installed) MIDI interfaces are available in this drop-down list. Select the desired MIDI device from the list.
- **Audio Device Menu:** All supported (and installed) audio interfaces are available in this drop-down list. Select the desired audio device from the list.
- **Stereo Pair:** Here you can define which of the stereo outputs should be used. It is normal to have one stereo pair available, labeled 1-2. However many pro audio devices have multiple outputs available, in which case you may choose the one that you would like Jazz & Big Band to output through.
- **Sample Rate:** Depending on the sound card and driver you are using, various sample rates are available. Set the desired sample rate here. Choose 44100Hz—if available— for best results.
- **Buffer Size:** The buffer size setting will determine the delay between pressing a key on your MIDI keyboard and hearing the sound (*aka* 'latency'). The default buffer size of 512 samples typically works well, but smaller buffer sizes will give a faster response (lower latency) and higher buffer sizes will give better audio performance (more polyphony and higher fidelity). Most modern computers and audio interfaces can handle a buffer size of 512 samples without a significant reduction in polyphony. If the sound is breaking up or crackling when a note sounds, first check that the audio connections and the wiring are good, then, try a larger audio buffer size setting. Please note that there is typically a trade-off between higher buffer sizes (polyphony and sound fidelity) and lower buffer sizes (faster response or lower latency). Also note that the sound card buffer size settings determine latency, rather than Garritan Aria Player itself.

Once you have your Audio and MIDI set up and have loaded one of the instrument patches, you can begin playing Jazz & Big Band. Press (use your mouse to click on) a key on the on-screen piano keyboard on the Garritan ARIA Player interface. If you can hear the selected instrument, try playing a key on your MIDI keyboard. If the MIDI and Audio configurations are correct, you should hear the corresponding instrument. If not, check the MIDI connections and wiring, and the MIDI output channel of your MIDI keyboard.

Also check that the MIDI channel for the loaded instrument is specified correctly. By clicking the number at the far right of each instrument slot in Aria, you may choose any desired MIDI channel or "OM" for Omni, in which case the instrument will respond to any commands sent on any MIDI channels. If you are hearing the notes play, then the basic configuration is complete, and you are ready to use Garritan Jazz & Big Band.

File Menu for Loading and Saving Presets in the Standalone

Configuration presets for Jazz & Big Band can be saved and loaded. This gives the user the ability to customize instruments to suit personal preferences and save configurations for convenient future use. The File menu choices are:

- **Load**—any saved configuration preset files in Aria format can be loaded by clicking on this choice and selecting the desired file.
- **Save**—any configuration can be saved by clicking on this choice, typing a name for the custom preset, and saving to a desired location.
- **Save as default**—any settings can be saved as part of the default, to be loaded automatically each time the Aria player is launched in standalone mode.
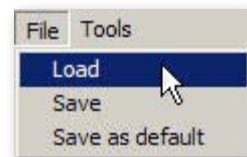
Tools Menu—Standalone Mode ONLY

The Tools menu includes:

- **Preferences**—as described in the basic setup information above.
- **Render offline**—MIDI files can be quickly rendered to audio using this feature.
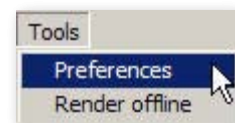
To use the Render Offline feature:

1. Click on the Load button.
2. Select the desired MIDI file
3. Click on the Name Audio Fle button.
4. Name the audio file and specify its location.
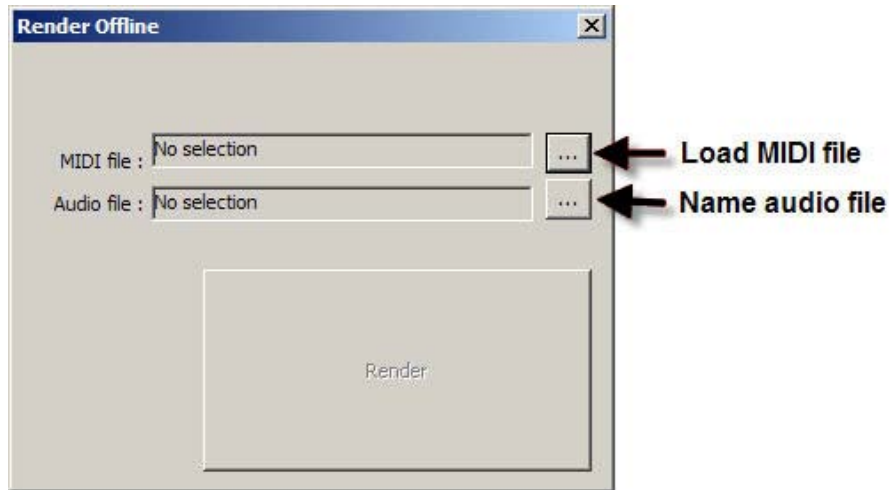
Once the files are in place, there is just one more step:
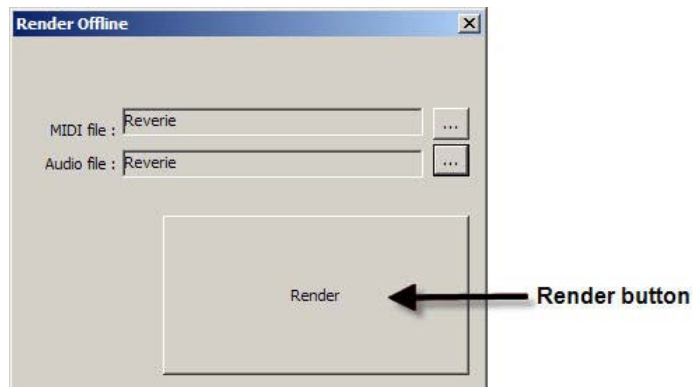
Click on the Render button. The audio file will be rendered to the specified location.

Note:

An alternate way to record audio from Aria is outlined below for users who would prefer to hear MIDI playback during the recording process.

MIDI File Player and Audio Recorder (Standalone Version Only)
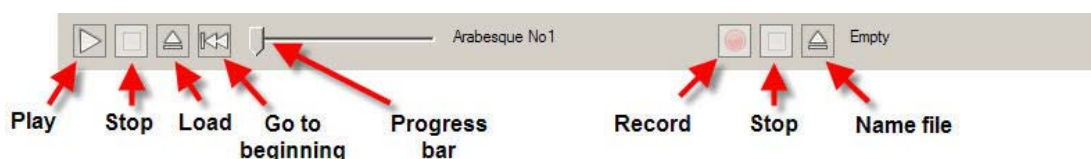
The standalone version of the player contains a MIDI File Player and Audio Recorder. They are located at the bottom of the standalone window. These features enable you to load and play a standard MIDI file and render an audio file from it. The MIDI controls are located on the left hand side and the audio controls on the right.

To load and play a MIDI file:
1. Click on the "Load" button.
2. Choose the file you wish to load.
3. Click on the "Play" button.

The MIDI file will play back using the presently loaded instrument and any other features (*e.g.* Ambience reverb) activated in the player. The progress bar will move to the right as the file is played. To start the file from the beginning, click on the "Go to beginning" button. The file can be stopped at any time by clicking on the "Stop" button. Notes from the MIDI channels in the loaded file will be routed to the appropriate input channels in ARIA.

To record your playback to an audio file:
*   Click on the "Name File" button.
*   Name the file and specify its desired location.
*   Click on the "Record" button.
*   Start playback by clicking on the MIDI "Play" button.
*   When playback finishes, click on the MIDI "Stop" button.
*   Click on the Audio "Stop" button.

The audio file will be located on your drive in the location you specified.

> *Note:*
>
> There is also an offline rendering feature (explained previously) that is located in the "Tools" menu of the standalone version. Using the Audio Recorder as explained above, the MIDI file being recorded will be heard during the recording process.

Using Garritan Jazz & Big Band as an Instrument Plug-In

When used as a plug-in, Garritan Jazz & Big Band is not a standalone program but rather a virtual instrument module that is seamlessly integrated into your favorite music software program or sequencer (assuming that it accepts such instrument plug-ins). They are called "plug-ins" because these are modular software applications that run inside a "host" music application, (typically a sequencer or notation program).

There are various uses as a plug-in:
- MIDI recording and sequencing of Garritan Jazz & Big Band
- Audio mixing of Garritan Jazz & Big Band with other instrument tracks within a single program
- Easy automation of Garritan Jazz & Big Band parameters in the music software program
- Effect processing of Garritan Jazz & Big Band sounds using effect plug-ins in a music software program
- Saving and recalling of all plug-in settings when the music software program or sequencer file is reloaded
- Integration with other instruments into a "virtual studio"

MIDI sequencing is akin to the old self-playing pianos. As the player pianos used mechanical techniques to reproduce performance by associating key presses and durations with holes in paper, MIDI sequencers use electronic data to record and reproduce performances. When you play a note on a MIDI keyboard, you are instructing the MIDI keyboard to play a note for a period of time, as well as how soft or loud that note will sound. The MIDI Sequencer will record and play back this data. A major advantage to using a sequencer is that all settings are saved together with the song files and are totally retained and recalled upon reload.

A great thing about plug-ins is that they work with a large variety of compatible music programs. For example, Garritan Jazz & Big Band can be used as a VST plug-in in many VST music programs, sequencers, supported notation programs, and hosts. Jazz & Big Band can also be used as an Audio Units plug-in or as an RTAS plug-in.

Here is a chart describing these three major plug-in standards:

Plug-in Standard	Description	Windows	Mac
VST	The VST plug-in stands for Virtual Studio Technology and was developed by Steinberg, the makers of the Cubase family of audio programs. It is also used by Cakewalk Sonar, Mackie Tracktion, Magix Samplitude, Nuendo, FL Studio, and other sequencers.	X	X
Audio Units	The Audio Units (AU) plug-in standard was developed by Apple Inc. for Core Audio under Mac OS X. Audio Units is the preferred plug-in format on Mac OSX and is used by Apple GarageBand & Logic and MOTU Digital Performer.		X
RTAS	RTAS plug-ins (Real Time Audio Suite) are designed to work in the Digidesign Pro Tools environment. Pro Tools hardware and software are used extensively in the pro audio and post production communities.	X	X

Basic Setup Information for Using Garritan Jazz & Big Band as a Plug-In Instrument

To use Garritan Jazz & Big Band as a plug-in instrument, you simply launch your host music application or sequencer first and then launch Garritan Jazz & Big Band from within it. Make sure that your sequencing host program is properly installed and configured, and that it is producing sound properly. Used as a plug-in, Jazz & Big Band's audio and MIDI data are managed by the host music software application.

Using Garritan Jazz & Big Band in a Specific Music Program or Sequencer

Garritan Jazz & Big Band works as a plug-in instrument within many popular music software programs. Each music software application has its own approach to handling plug-in instruments. They each have a different method of installation as well as differing means of loading and accessing plug-ins. It is important to make sure that you refer to the instructions in your music software application's manual regarding the loading and operation of plug-in instruments.

Typically when using VSTs, the .dll files (dynamic-link libraries) associated with software instruments will all be kept in one VST folder which the host application uses to locate all available instruments (more information below).

Although it is not within the scope of this manual to delve into how plug-ins work for the various music applications, there will be tutorials on how to use the Garritan Jazz & Big Band with the various music software programs. Please refer to the Support WIKI pages on the Garritan website at www.garritan.info.

Saving Jazz & Big Band Parameters in a Music Program or Sequencer

While using Garritan Jazz & Big Band with a host music application, when you save a sequence or a project with the host program, all of Garritan Jazz & Big Band's parameters will be automatically saved as well. You do not need to do anything in the Aria Player interface for this to happen. When you re-load your host music project, the Garritan Jazz & Big Band settings will revert to the state in which they were when you saved your project file.

Important Technical Notes:

Windows VST applications only: To use Garritan Jazz & Big Band with more than one VST application, you need to manually copy the ARIA Player VST_x86.dll, installed into the chosen folder during installation of the library, to the appropriate VST-compatible host application's VST folder. Please refer to your particular application's user's guide and the Garritan support site for more information.

Regarding 64-bit hosts: Some hosts have one common VST folder for both x64 and 32-bit plug-ins, please only use the version of the plug-in that is native to your host, e.g.: x64 bit version of Sonar, use the ARIA Player VST_x64.dll. Mac OSX has standard folders for both VST and AudioUnits plug-ins and do not require this extra step.

An additional copy of the VST plug-in is available in the main Garritan Jazz & Big Band applications folder, in the VST subfolder. Please don't use this folder as your main "vstplugins" folder. Please note that a saved sequence in one music application may not be usable in other music applications, as each application generally has its own proprietary format.

VST Expression Support

Garritan Jazz & Big Band supports VST Expression, a new system that dramatically simplifies handling of articulations and expressions with sample libraries within Steinberg's Cubase. The new technology makes recording and editing articulation commands much easier, with all articulation data displayed separately in both track inspector and editor windows. More information about VST Expression can be found at the Steinberg website.

Using Garritan Jazz & Big Band with a Notation Program

Notation is a fundamental part of music creation. Notation programs allow you to easily create and print sheet music with your computer. Until recently it was not possible to play realistic sounds from notation programs, but Garritan has pioneered the use of notation software programs with samples.

There are two ways to use Garritan Jazz & Big Band with notation programs. One is to use it directly from within a notation program that is capable of hosting plug-in instruments. The other is to use the Aria Player in Standalone mode and route the MIDI output from the notation application to the player. Recent advances in notation technology will allow you to play Jazz & Big Band sounds directly from within certain notation programs.

Note:

Some notation programs may not support software instrument plug-ins and some older versions may also lack plug-in support. Please check your notation program to make sure it supports VST or Audio Units software instrument plug-ins.

There are many resources concerning the specifics of how to use Garritan Jazz & Big Band with various notation programs on the **www.garritan.info** website including tutorials, notation files, tips, techniques, plug-ins, special programming, troubleshooting advice, and informative links.

HOW THE
ARIA PLAYER WORKS

How the Garritan Aria Player Works

The Aria Player is a custom-made player developed specifically for Garritan libraries such as Jazz & Big Band. It constitutes the best sounding and most powerful sample engine available, built from the ground up for high performance and exceptional quality. The Aria Player enables you to load Garritan Jazz & Big Band instrument sounds, control various parameters for playback, and do a number of other things. The software engine was custom designed and programmed by Plogue Art et Technologie Inc. The Aria Player has various view screens or "windows" that are accessed by the four view tabs to the right. Those screens consist of the "Mixer" window, the "Controls" window, the "Effects" window, and the "Settings" window.

The Basic Interface and the View Screens:

The Mixer Window

1. **Slot (1 - 16):** You can have up to sixteen instruments loaded in each instance of the ARIA Player.

2. **Load Instrument:** Click here to load an instrument in the corresponding channel.

Clicking the instrument slots brings up a dialog box to load the instrument(s) of your choosing. The instruments will be grouped in a simple hierarchical menu by Garritan Library, usually by family.

Choosing "Empty" will remove an assigned instrument from a channel. Choosing "Import" will allow you to load an .sfz file (a patch) to use as an instrument sound. Choosing "Reload" will restore the default parameter settings for that instrument.

There are two left/right arrow keys at the right of each instrument slot. You can use those arrows as a quick way to load preceding or following instruments.

3. **MIDI Channel Assignment:** Click the number to the right of the Instrument field to select the channel for the instrument you have loaded. If an instrument is assigned to that channel, you should see its pitch range represented on the virtual keyboard at the bottom of the window.
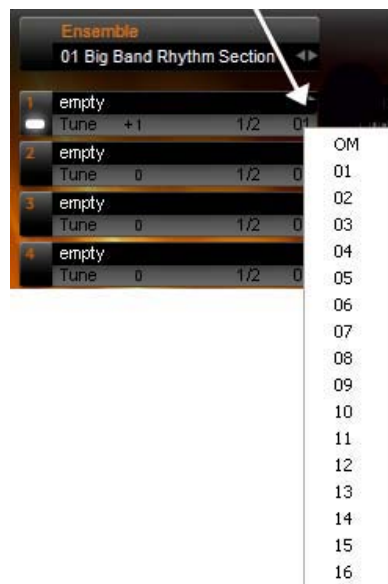
4. **Tune:** The "Tune" Control will allow you to make tuning adjustments to each instrument. Tuning controls are adjusted by click and drag—horizontal movements to the right make the pitch sharp. Tuning range is +/-100 cents.

5. **Output Assignment:** Here you can assign outputs. The default is channel 1 and 2 (stereo).

6. **Sends:** The Send Knob controls the amount of signal sent to the Ambience reverb for each corresponding channel.

7. **Pan Control:** This slider controls the left-to-right balance of the audio of the corresponding channel. Also see Stereo Stage control information.

Note:

You can CTRL-click (Command-Click on OSX) a knob to put it back to its default position.

8. **Keyboard:** The bottom of the window features a virtual onscreen keyboard that indicates the range of notes that can be played on that instrument. When a channel with an instrument assigned to it is selected, a section of the keyboard will be highlighted. Keys that are being played will be shown in real time.

Note: Most brass instruments contain programming for the creation of "shakes." This programming results in the display of extra white notes at the top of the instrument range that appear to be silent. ARIA displays all available notes, even ones that are active only under certain conditions (such as shakes).

9. **Keyswitch Identification:** This section identifies the keyswitches being used. Keyswitches are used to change between techniques and articulations without the need to load separate patches. The Keyswitches are displayed below the instrument's range using the color pink. The selected keyswitch is displayed in yellow and the represented patch is identified in the window to the left of the keyswitches.

Note: In the Notation instruments all keyswitches are located in the very bottom octave, below the display range of the virtual keyboard. Clicking in the space where the keyswitch name is shown will open a menu of the available keyswitches. You can choose a keyswitch from the menu.

10. **Volume Control Sliders & Solo/Mute Buttons:** This slider controls the relative volume level of the corresponding channel. Above the volume control sliders are the solo and mute buttons.

11. **Window Selection**—Mixer/Controls/Effects/Settings: These four tabs allow you to select between the Mixer, Controls, Effects, and the Settings windows.

12. **Load Ensembles** - Click here to load ensembles.

Controls Window

All virtual knobs in the Controls Window can be adjusted by holding down the left button of your mouse and moving it up or down (rather than in a circle). Release the button to set the level. You can CTRL-click (Command-Click on OSX) a knob to put it back to its default position. The numerical text below the knob will give a measurement reading.

Equalizer Controls

The EQ section is a three-band equalizer, with each band having a separate gain knob. The "Low" controls the filter's gain for the bottom of the spectrum, the "Mid" for the midrange frequencies and the "High" controls the top end of the

frequency spectrum. Adjust by placing your cursor over the desired knob, left click/hold, and move the mouse forward or backward. Release the mouse button at the desired number.

Auto-Legato Controls (including auto-trills)

Auto-Legato is a convenient way to create smooth legato note transitions whenever note overlaps are present. This feature automatically detects note overlaps and applies changes to the attack and decay characteristics of the note transitions. There is one control button:
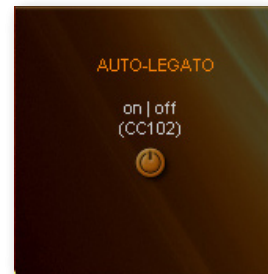
On/Off button. This activates/disables Auto-Legato. The button lights when activated. This switch can also be controlled using CC#102.

This control also provides auto-trills. This is an extremely convenient way to create trills. From a MIDI keyboard, just hold the first note of the trill while pressing and lifting the second note of the trill and the two notes will alternate.

Please note that Auto-Legato works monophonically and can cause loss of that instrument's ability to play chords (polyphonically). Auto-Legato is mainly for use as an easier way to achieve legato. You may get better results with manual techniques, though they take more effort.

Stereo Stage Controls

When Stereo Stage is turned off instruments can be panned from left to right in the usual way. This positions instruments left to right by relative left/right volume intensity only. When Stereo Stage is turned on it adds calculations that simulate the arrival times from the position of the instrumental sound source to a pair of virtual stereo microphones plus the first reflections from side walls, rear walls, and ceiling. This can create a more three dimensional image for positioning instruments on the stereo stage, both left to right and front to back, especially for monaural instruments (*e.g.* solo instruments that lack recorded stereo information.)

There are two controls visible on the Controls page of the interface for Stereo Stage.

1. **On/Off button.** This activates/disables Stereo Stage. The button lights when activated. This switch can be also be controlled using CC#103.

2. **Depth.** This sets the position of the instrument front to back on the stereo stage. Small percentage numbers place instruments closer to the microphones; larger percentages place instruments

farther back on the stage, 100% being near the back wall of the stage. The Depth parameter can also be controlled with CC#36.

When Stereo Stage is activated the panning knobs in the mixer section of ARIA still control the left to right positioning.

Note:

As in real life, instruments that are placed near the microphones will display greater separation from left to right than instruments that are positioned near the back wall of the stage.

Instrument Controls

The control parameters available in this section will vary from instrument to instrument. Some instruments may have few controls and some may have many, depending on the programming of each instrument. These controls usually correspond to CC MIDI controller numbers and load with default settings.

Effects Window

The Effects tab brings up the control settings for Ambience reverb. Ambience can be used by adjusting the send knobs to apply flexible room reverb to the sound of the Jazz & Big Band Instruments.

The acoustic environment is integral to the overall sound of music. How the instruments blend and project to the listener can be vital to the musical performance itself. Ambience is very noticeable in live jazz and big band performances. From intimate jazz clubs, to dance halls and concert venues, the reflection of the original sound source off of walls and surfaces has a dramatic effect on the quality of sound we perceive.

Reverberation describes the phenomenon that occurs whenever a sound is made in an ambient space. Whenever a sound is produced in an enclosed space it radiates in all directions. When these radiated sounds hit a surface such as a wall or the ceiling, the sound is either reflected or absorbed. The first reflected sounds are usually stronger and become more and more diffuse as the sound bounces around the room. Our ears and our brain recognize these signals and let us know about the type and size of space we are in.

Much the same way as the acoustical space adds a great deal to the music, reverb can impart that certain three-dimensional ambient sound to an instrument or group of instruments. Reverb can also help to smooth out the sounds of the instruments and cause them to blend together in the mix by giving them a sense of space and effectively smoothing the sonic edges.

Jazz & Big Band integrates the Ambience™ Reverb—a great sounding reverb that rivals the quality of the best commercial reverbs. Just as Jazz & Big Band is a "virtual instrument" designed to simulate musical instruments, Ambience allows you to simulate the reverberation of a concert hall and many other spaces. You can create virtual concert halls, ballrooms, recital halls, parlors, auditoriums, cathedrals, and other spaces.

Ambience is turned on by default and to deactivate it you must click the ON/OFF button. It is often not desirable to use Ambience reverb if you are sending the output of ARIA through another reverb plugin.

Ambience has a number of performance space presets to choose from. These presets have been custom-made for Garritan Jazz & Big Band. You can also edit these presets or experiment with the various settings to customize the acoustical environment as needed.

There are a number of main knobs in the Ambience control panel. The most important parameters are reverb time (the time for the reverb to fade away), size (the size of the room) and the pre-delay time. Below is a description of the relevant controls in Ambience:
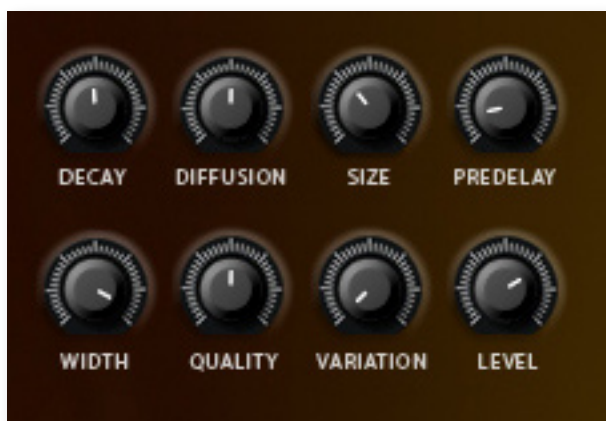
Note:

To control the amount of reverb for each instrument, use the Sends in the Mixer window.

- DECAY—This controls the time it takes for the reverb reflections to fade away into silence

- DIFFUSION—Diffusion is the reflecting surface's ability to spread the reverb out. This control has a subtle effect on the sound and is especially noticeable with small room sizes.

- SIZE—This controls the size of the room. Note that long reverb time and small room sizes do not mix well. For natural sounds, a large room size, such as a concert hall, should be accompanied by a long reverb time, and vice versa.

- PREDELAY—This controls the amount of time between the direct sound and the first of the reverb reflections. It is pre-delay that defines our perception of the size of the room.

- WIDTH—This controls the stereo spread from mono (0%) all the way to a wide stereo (100%). It is recommended this be set close to 100%.

- QUALITY—This knob allows you to trade off reverb quality for CPU usage. High quality equates to high CPU usage. You can make fun effects if you set it very low (try it!). If there is too much CPU demand on your machine, try turning down the quality.

- VARIATION—This control creates a new variant of the same room.

- LEVEL—This controls the amount of the processed reverberant sound.

Tip:

Try using different Ambience levels for different instrument groups, assigning one level to the saxophones and a different level for the trumpets and trombones. Often instruments toward the back of the stage may need more reverberation than instruments towards the front of the stage. Use the effects "Send" in the Mixer window to control the levels. Be judicious and try to avoid drowning the band in too much reverb or muddying the sound with delay trails. Remember, in some smaller spaces such as a jazz club, instruments can be fairly intimate. Ambient effects should blend as part of the sound without being perceived as something that was added. Careful and proper use of panning and equalization will also help to keep the various sections from interfering with one another. The effort to make your virtual performance spaces sound just right will prove invaluable.

Note:

It is important to bypass the on-board reverb of the ARIA Player when using Reverb or Convolution in your sequencer or host program. Otherwise you will have two simultaneous reverbs and it will sound very muddy.

Settings Window

The Settings tab brings up additional information about the ARIA Player. This screen displays the version of the software and its copyright information as well as information about how the ARIA sample engine is performing. The information in the two left-hand columns indicates the software's current CPU and RAM usage, disc efficiency, and current MIDI events and settings. You may adjust some of the settings in this window by clicking on the box to reveal a drop-down menu:

- **Dyn Max:** Determines the threshold for RAM usage by the software. The default is "256 MB" and the other choices are 128 and 512.

- **Pre-Caching:** Determines how many samples of an instrument the software will process before playing them. A higher setting will result in longer initial load times, though you should increase this setting if you are using a slower computer. The default is 32 Kb.

- **Quality:** Determines audio quality of the playback and recording. The default is Normal (Hermite).

- **Tuning System:** Determines the tuning system of the instrument in the software. There are different tunings for regions throughout the world, but to start, we recommend the default, International 440. Other choices are shown on the right:

- **Inst. Poly**: Determines the amount of polyphony (multiple notes sounding simultaneously) each instrument can play. A higher setting will allow for greater polyphony but wil also increase CPU usage. The default is 32.

English pitchpipe 380 (1720)
Handel fork1 409 (1780)
Baroque 415
Handel fork 422.5 (1740)
Dresden opera 423.2 (1815)
French Law 435 (1859)
British Phil 439 (1896)
International 440
European 442
Germany, China 445
La Scala in Milan 451 (18th)

Get More Sounds Button:

Clicking this button will bring you to a webpage where you will be able to download more instruments and sounds.

GET MORE SOUNDS

Get Help Button:

Clicking this button will bring you to a Garritan Support web page where you will be able to obtain help.

GET HELP

Scala Import Button:

The import button provides a variety of other tunings that can be imported and used with Jazz & Big Band. This is not a feature that would normally be used in a jazz context but certain unusual and/or experimental musical applications will benefit from its availability. The scala file import feature enables the use of thousands of other tunings, if desired.

SCALA:
IMPORT   01 - equal.scl
Scala center: C5

The following menu appears when the "**Import**" button is clicked:
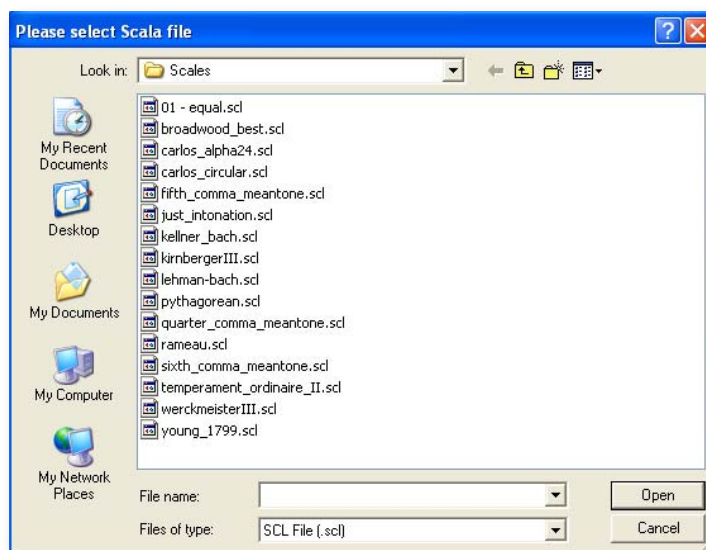
The **Scala Center** box allows you to select the base note (or center) of your scale.

ABOUT JAZZ
and the Instruments in Garritan Jazz & Big Band

What is Jazz?

Ask one hundred people *"What is jazz?"* and you will probably get one hundred different answers. Part of the reason is because jazz is not predictable like classical music where players must play what is on the printed page without much artistic license.

Jazz is a living art form, always changing and evolving, and never the same. The essence of jazz is improvisation. In most jazz performances, players interpret and communicate music in their own unique way and express their own individual voices. The players typically play solos they make up on the spot. This makes jazz a very expressive musical form, capable of musically communicating the thoughts and feelings of the players. Whether it is sorrow or joy, no music so eloquently gives voice to an individual.

Jazz music is player-oriented where basic guidelines are established and the players are free to individually or collectively improvise. Usually, the same piece cannot be played again in the exact same manner as it can in classical music. Jazz can take a familiar tune and make it fresh each time it is played. *"Never play a thing the same way twice"* remarked Louis Armstrong. Although improvisational in nature, jazz requires considerable skill. The simplicity will fool you.

It is in the act of spontaneous creation where we truly find Jazz, and the listener plays an important role and experiences what is being expressed. There is a personal connection with the musician that is unlike other forms of music. Jazz invites the listener into a relationship with the players. The inspired motif at a particular instant may be in response to audience involvement as the player communicates.

So, again, what is jazz? Someone once asked this question to legendary great jazz musician "Fats" Waller. His response was *"If you hafta ask, you ain't never gonna know!"*

The Growth of Jazz
by Chuck Israels

In the late nineteenth century in the United States, the popularity of brass and concert bands, such as those of John Philip Sousa, made trumpets, trombones, flutes, clarinets, saxophones, and drums familiar and easily accessible to young American musicians. Before long, players of these instruments, especially those who lacked the traditional European-style schooling in technique, began to exhibit some of the nuances and inflections of American spoken language in the way they expressed themselves through musical sounds.

In the evolution of classical music, a general consensus had developed about how instrumentalists were to be trained to adjust and modify their playing in order to create a homogeneous ensemble blend and an instrumental version of the operatic vocal line. The situation in the shorter history of jazz was somewhat different. Individual nuances of timbre, attack, and pitch inflection became valuable commodities to the jazz musician, and the development of a personal sound was taken as a sign of musical maturity.

For example, the saxophone, developed in the nineteenth century as a reed instrument capable of competing in loudness with brass instruments, and which has a more or less uniform sound in Classical music, evolved over the twentieth century into a jazz instrument most remarkable for its ability to accommodate a variety of personal expressive styles. There is not so much a jazz saxophone sound as there are Coleman Hawkins sounds, Lester Young sounds, Johnny Hodges sounds, Charlie Parker sounds, Harry Carney sounds, and Gerry Mulligan sounds. The situation is not all that different for brass instruments. Louis Armstrong changed the sound of the trumpet for everyone, even classical trumpet players, but Miles Davis and Clark Terry are instantly recognizable too, not to mention all the sounds that Ellington's players contributed with special mutes and plungers. And whose sound represents the jazz trombone, Jack Teagarden's, Al Grey's, Bill Harris' or J.J. Johnson's?

Similar situations exist among the rhythm instruments where creative bass players, drummers, and guitarists developed personal approaches to their instruments. Bassists Jimmy Blanton and Ray Brown invented ways of playing pizzicato sounds that had a remarkably extended decay, while still maintaining a nearly superhuman power of rhythmic precision and strength of attack. Over time, this kind of instrumental sound became accepted as the "default" for jazz bass lines, supplanting the tuba, bass

saxophone, and left hand of the piano player as the ideal embodiment of pulse and pitch for propelling the rhythm of this American music.

Charlie Christian was the first jazz guitarist to find acceptance and acclaim using an electromagnetic pickup, and his playing remains a template for the electric guitar in jazz. Others have continued to develop this technology, so that the accepted sound of the electric guitar now embraces timbres as diverse as Wes Montgomery's and Jim Hall's.

The development of the standard jazz drum kit, with each of the drummer's limbs available to contribute to the pallet of percussion sounds and rhythmic textures, was another factor in the history of the idiom. Drummers like Jo Jones, Kenny Clarke, Max Roach, Roy Haynes, Buddy Rich, Art Blakey, Philly Joe Jones, and Elvin Jones each left an indelible mark on the way we hear the possibilities of the drum set, establishing a variety of ways of using ride cymbals, high hat cymbals, snare drums, tom toms, pedal operated bass drums, mallets, sticks, and wire brushes to create interesting and changing drum parts.

The inclusion of a rhythm section (piano/guitar, bass, and drums) "continuo" part in most jazz ensembles is a part of the tradition that is particularly useful in a kind of music which often depends on a repeated series of chords to set a controlling background texture against which a varied foreground can be successfully designed. That foreground may consist of an improvisation played by an individual instrumentalist, a singer, or a combination of instruments in a written passage. The rhythm section instruments have a wonderful effect on the music, but it's also useful to leave them out in some passages for contrast and for the dramatic propulsive effect of their re-entry.

The history of the organization of these instrumental sounds into efficacious combinations is full of change and development, from early New Orleans style polyphonic ensembles, to the modern wind ensemble sounds of Gil Evans' music. There is a world of idiomatic history just in the study of rhythm section combinations and balances and another encyclopedia's worth of tradition in the way Fletcher Henderson, Count Basie, Duke Ellington, and Billy Strayhorn organized the reed and brass sections.

The history of jazz instruments is full of unique and personal ways of making individual instrumental sounds and equally unique and creative ways of combining them. There is a rich palette of sounds

available to those jazz composers/arrangers lucky enough to have access to good musicians to perform their work. For those for whom this access is unavailable, there are sample sounds to use as audio "sketches" to check basic timbres and balances as they experiment and create new music. The Garritan Jazz & Big Band library is intended to serve this purpose.

Getting started using the sounds in the Garritan Jazz & Big Band will be intuitive enough for jazz arrangers who have had experience with live musicians. For those whose experience is more limited, here is some basic jazz arranging information:

All the saxophones have the same written range, from B flat below middle C, to F, 2 1/2 octaves above. This transposing trick allows a saxophone player to switch instruments without the necessity of learning new fingering, and it makes an understanding of the range and registers clear simply by observing the position of the notes on the staff system. It is helpful to understand that the saxophone was invented for volume, and it is not an easy instrument to play softly. The lowest two or three notes on the soprano, alto and tenor tend towards a rough and honking quality that is not easy to control, while the baritone is a little easier in this respect. The high range of the baritone, somewhat underused in the standard repertoire, can have a stentorian, singing quality that makes an effective solo voice and, incidentally, blends well with the French Horn. When combining saxophones in unison with brass instruments, the most effective combinations occur when the timbres are recognizably different. Combining a baritone Sax with a Trombone is more interesting than using a tenor sax with it.

Trumpet and trombone ranges are roughly similar, though separated by an octave. The trumpet range starts on E below middle C (written F#) and extends comfortably 2 1/2 octaves to a high B flat (written C above the staff). This range is accessible to most student trumpet players. Expert lead players can extend that range up to a 5th higher while high note specialists soar another octave or more above that. The trombone has a similar range, starting on E below the bass clef staff and reaching the high B flat a 7th above middle C. Many trombone players are quite comfortable extending that range upwards by a 3rd, and lead players go even higher on occasion. There are also useful pedal notes available below the usual bottom of the range. Trombones without triggers cannot play notes between the low E and the pedal B flat (a diminished 5th lower), but the pedal notes can be effective, especially in a three or four part unison. (B flat, A, and A flat are all available, but the tradition is to make special use of the B flat.) Bass trombones (with extra tubing brought into play with trigger valves) can play all the chromatic notes down to the pedal notes and then extend the range down to an F below that.

The most useful guitar range is written from E below the treble clef to G, 3 octaves above middle C (sounding an octave below the written range). Most guitars have fretboards that extend a 4th above that G, but that range becomes a little thin sounding because of the short length of the vibrating string. When writing for the guitar in unison with other instruments, it is often good to keep the guitar range within the staff. For instance, having the guitar part in a written unison with a piano line puts the sounding guitar an octave below the piano, but the effect is that the sounds blend well, sometimes better than writing the guitar an octave higher, resulting in a real unison.

Basses go from a written low E (below the bass clef staff) to G above the staff for normal bass lines (sounding an octave lower) with another octave available for solo passages. When it is necessary to have bass notes sound in sustained passages with wind instruments, the results are better when those notes appear in the lower winds. Overdoing the volume of the string bass, or using an electric bass to balance the harmony in the winds, may overpower the ear's ability to hear the mixtures of notes and harmonies in the middle and upper parts of the music's range. To my way of hearing things, this is the biggest and most common error in the use of the many technological advances that allow musical instruments to play louder. The electric bass guitar (or amplified string bass) is a fine choice for music largely devoid of dynamic and textural nuance, and there is some fine music in that category, but may not be appropriate for even the loudest music that Basie or Ellington ever played.

It is helpful to remember that all instruments have the effect of sounding low at the bottom of their ranges, and high at the top of their ranges, so that middle C on the flute sounds deep and low, while the same note on the baritone saxophone or trombone sounds quite high, It sounds very high on the bass.

This is only a quick overview of what's available to the user of this sample library. There are many fine arranging and orchestration books available where one can find information about the traditions of writing for jazz instruments, range charts for these and other instruments, and examples of classic scores. A good source of arranging knowledge is the collection of Ellington scores published by Jazz @ Lincoln Center.

Chuck Israels,
Bellingham, WA

Jazz Arranging Techniques

by Gary Lindsay

The road from orchestrator to jazz arranger may be navigated more easily if you have the right tools. The most fundamental tool, "jazz concept," is developed through listening to jazz arrangers and composers and defining the roles of members of a jazz ensemble. The roles of horn players (a generic term referring to trumpet, trombone and saxophone players) in a jazz arrangement fall within three categories: melody (or improvised lines), counter-melody, and accompanying rhythmic or sustain pads.

The jazz band rhythm section (piano, bass, guitar and drum set) doesn't have a direct parallel in most orchestral music. In addition, the members of the rhythm section play dramatically differently according to the style of music, *i.e.*, swing, Latin or funk. The role of the piano and/or guitar is predominantly as accompanist providing a combination of sustained and rhythmic pads commonly referred to as "comping." Occasionally, their function includes melody or countermelodies in the form of written music or improvised solos. Depending on the style of the music the bass may provide an ostinato pattern, a highly rhythmic/syncopated pattern, or a quarter note walking style (swing)—any of which will contribute a harmonic, rhythmic, and even melodic (walking bass) element to the proceedings. The drummer, usually using all four limbs, provides rhythmic pulse to the arrangement as defined by the musical style.

Listen with "arranger's ears" to identify the elements of melody, counter-melody, rhythmic and sustained pads, and the role of each member of the rhythm section. Observe how each element is being scored (orchestrated). An arrangement is not static, it is moving along a timeline at a speed determined by the tempo of the arrangement (constant or otherwise). As with orchestral writing, the elements of a jazz arrangement constantly change. The melodic element may start in the piano, move to saxophones, and end in the brass. With all the other elements shifting (not necessarily at the same time), there is an almost limitless number of ways to combine elements to create a unique arrangement.

"Jazz Arranging Techniques" is a comprehensive guide to the tools and techniques of jazz arranging. Adopted by colleges and universities around the world, this is the authoritative book for jazz arranging, providing the theory and arranging techniques that can be used with the sounds of the Garritan

Jazz & Big Band Library. This book provides examples of techniques used in small and large ensembles and further explains how to create voicings, notate rhythm-section parts, articulate horn lines, adjust the balance and blend, etc., with a sequential approach. In addition to numerous scores, illustrations and recordings, the book also incorporates exercises and assignments. Multiple recordings are provided on the accompanying CD for listening and score analysis. Jazz theory and harmony, principles of jazz voice leading, voicing techniques, rules governing music calligraphy, chord symbol nomenclature, and jazz notation and articulation are presented in a very systematic, step-driven approach.

For information about "Jazz Arranging Techniques" visit **www.lindsayjazz.com**

Gary Lindsay
Miami, FL
www.lindsayjazz.com

Kinds of Jazz

Jazz provides many musical opportunities for creative expression in a variety of styles. Although there is no set form of jazz, there are many subcategories within the various styles. Below are some of the most common styles of jazz and some of artists who helped develop them. This is not a comprehensive list, it just scratches the surface:

- **Dixieland:** Louis Armstrong, Original Dixieland Jazz Band, Jelly Roll Morton, Earl Hines, Sidney Bechet, Johnny Dodds, Bix Beiderbecke, Kid Ory
- **Big Band/Swing:** Count Basie, Nat King Cole, Benny Goodman, Billie Holiday, Duke Ellington
- **Bebop:** Charlie Parker, Dizzy Gillespie, Thelonious Monk
- **Cool jazz:** Miles Davis, Dave Brubeck
- **Free jazz:** Ornette Coleman, Cecil Taylor, John Coltrane (Ascension album)
- **Jazz-Rock Fusion jazz:** Miles Davis, John McLaughlin, Herbie Hancock
- **Modern Jazz** (contemporary and avant-jazz: Wynton Marsalis, Pat Metheny, Joe Lovano, Joshua Redman, and Don Byron
- **Latin Jazz:** Afro-Cuban and Brazilian: Jesus Alemany, Mario Bauzá, Eddie Palmieri.

The World of Sampling and Virtual Instruments

Garritan Jazz & Big Band is a complete collection of actual high-quality recordings (or samples) of nearly every note, of each musical instrument commonly used in a jazz and big band context. When Garritan Jazz & Big Band is loaded and you play a note on your keyboard, what you hear sounds remarkably like the real thing, because it is an actual recording of an instrument.

Developed in the early eighties, sampling technology has grown substantially. Sampling is now everywhere. Many movies, prime-time television shows, and interactive games use sampling technology. Now everyone can have a jazz and big band in their computer. With Garritan Jazz & Big Band, the sample player is integrated with the sounds, effectively turning a computer into a band of virtual instruments.

Tip:

Don't overlook the possibility of combining Jazz & Big Band instruments with GPO or other orchestral libraries. JABB instruments can expand your palette of sounds for many musical applications, not just Jazz.

About the Instruments in Garritan Jazz & Big Band

The Saxophone and Woodwind Instruments

The Woodwind section consists of several varieties of instruments, each with its own unique sound. These instruments include varieties of flutes, clarinets, and saxophones.

There are 16 different saxophones in Garritan Jazz & Big Band, ranging from a diminutive sopranino saxophone to a large subcontrabass saxophone.

PITCH RANGES—WOODWIND INSTRUMENTS IN JABB

The chart below shows some of the typical ranges of the individual woodwind instruments as they correspond to a piano keyboard. These ranges are not absolute and virtuoso players can often play beyond the typical upper range of the instrument.

Flutes and Clarinets

Middle C
Piccolo
Flute
Alto Flute
Bb Clarinet
Bass Clarinet

Saxophones

Middle C
Sopranino
Soprano Sax
Mezzo Soprano Sax
Alto Sax
C Melody Sax
Tenor Sax
Bari Sax
Bass Sax
Contrabass Sax
Subcontrabass Sax
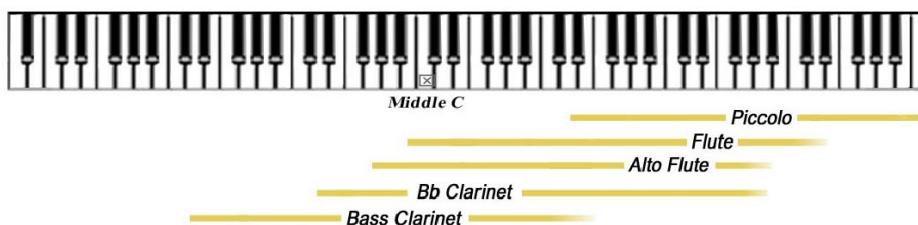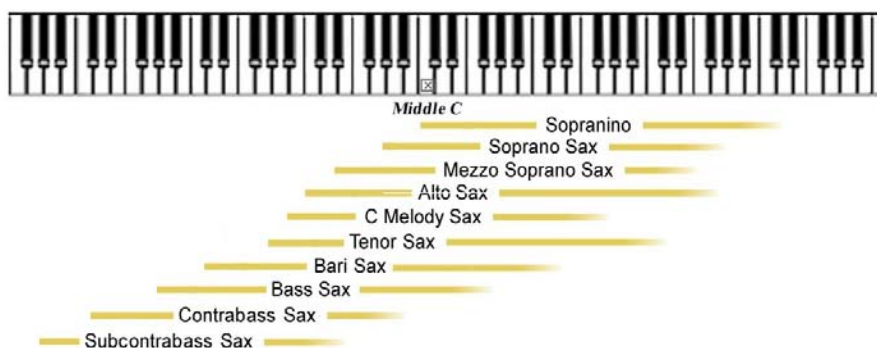
The Brass Instruments

The brass instruments commonly used in a jazz or big band include the trumpet and the trombone. Sounds are produced by the vibration of the lips as air is blown past the lips into a funnel-shaped mouthpiece connected to hollow metal tubing that terminates in a bell. The length of the tubing is modified by valves that re-route the air flow as part of the process to play different pitches. The vibrating lips of the player have the same function as the reeds in the saxophones and clarinets.

The charts below show the typical ranges of the individual brass instruments as they correspond to a piano keyboard. These ranges are not absolute and virtuoso players can often play beyond the typical upper range of the instrument. Good brass players can also play pedal tones. Pedal tones are notes that lie below the natural range of an instrument and take a great deal of control to produce. Mutes are typically used over a more restricted range partly due to the difficulty in playing mutes in tune in the extreme low and high ranges. Mutes are best applied to the middle register of the trombones and trumpets. Jazz and Big Band limits the mutes to approximately a three octave range.

The trumpets have additional release effects that only apply to certain portions of the range of the instruments. The characteristic release "kisses" only occur on the highest notes (generally, above the high C (concert Bb). "Falloffs" and "Doits" are restricted to a two octave range. "Falloffs" are a release technique where the player allows the pitch to rapidly fall downward, striking each note of the harmonic series during the descent. "Doits" are the reverse. The player creates a rapidly ascending effect through the harmonic series, often combined with a "half valve" technique to smooth the ascent. "Shakes" involve quickly shaking a trumpet back and forth while sustaining the note. This makes the tone go sharp and flat, sounding similar to a lip trill.

Trombones typically use the slide for similar effects, especially the falloffs, but the result is usually a rapid and smooth change in pitch without the individual notes of the harmonic series being struck. In Jazz & Big Band these effects are handled with pitchbend data. Tuba is only available in the Open horn, no mutes. It does not offer falloffs, doits, or kisses. See the charts below for details on trumpet and trombone ranges for open, muted, and release effects.

PITCH RANGES—BRASS INSTRUMENTS IN JABB

Trumpets

Open Trumpet

Middle C

Kisses

Falloffs & Doits

Mutes

Trombones

Open Trombone

Middle C

Mutes

Bass Trombone

Open Bass Trombone

Middle C

Mutes

Tuba

Open Tuba

Middle C
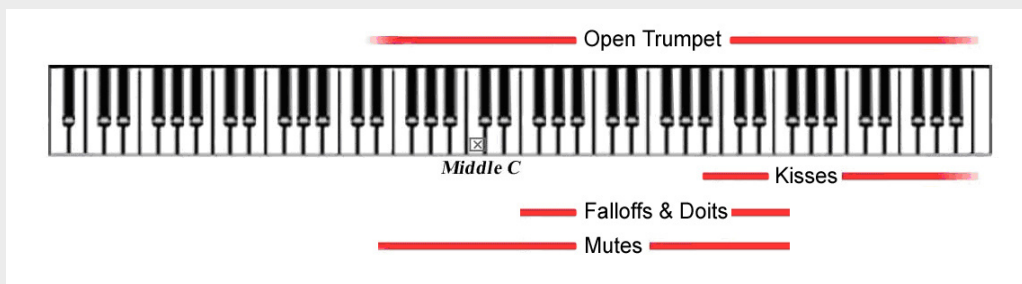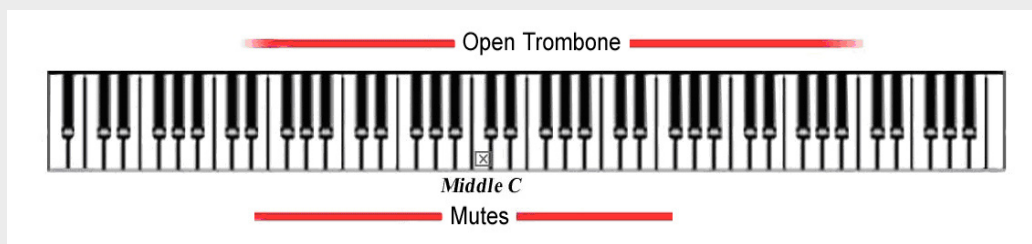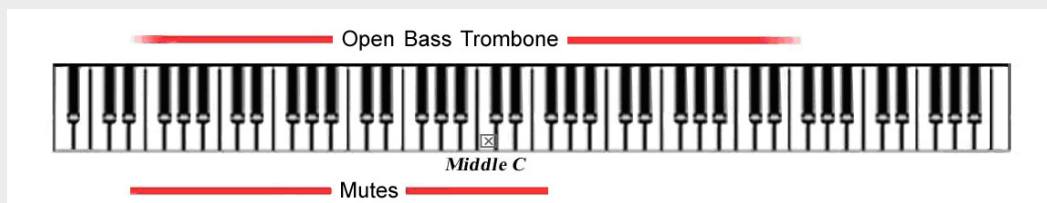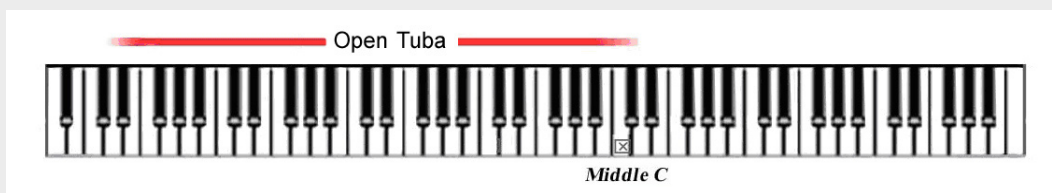
The Rhythm Section

A good rhythm section is the backbone of a jazz band. The rhythm section usually consists of bass, drums, piano, and guitar. They play different roles than the other instruments of a jazz band. The rhythm section will maintain a steady rhythm or tempo, establish the style and feel of the piece, and define the harmonic framework of the music.

Piano and Guitar

The piano and guitar typically function as percussive instruments in a jazz band and often provide rhythmic energy to the music. In jazz bands one often hears the pianist or guitarist play short well-placed punctuated chords. Both will often "comp" behind a soloist or construct chords on-the-fly from charts or chord symbols. The sustain pedal on the piano is used less frequently than in classical playing. Unlike classical music the pedal is not often used, except for special effects.

Acoustic Bass

A bass player is necessary to provide the rhythmic and harmonic foundation for the band. Jazz acoustic bass technique is very different from orchestral playing. The bass often plays in a legato style especially in swing music where a bass line will "walk" in even, smoothly connected notes that follow the beat of the music. Playing large leaps with too much separation is often avoided. Bass players will either play written parts or construct bass lines from chord symbols.

Drum Kit

A drummer in a jazz band establishes and maintains the beat and tempo of the music. A drummer also establishes the form of the music (A-B-A, or A-A-B-A, etc) and provides the cues for the other players to follow. The hi-hat and ride cymbals are very important to the drummer in jazz, with the hi-hat often foot closed on beats 2 and 4 and the ride cymbal establishing a swing pattern.

PLAYING GARRITAN
JAZZ & BIG BAND INSTRUMENTS

Playing Garritan Jazz & Big Band Instruments

Garritan provides stellar tools to transform high-quality instrument sounds into stunningly realistic performances. The ARIA Player offers an easy, intuitive, and standardized control system to enable you to play and shape the instrumental sounds, either in real-time or through a sequencer or notation program. The controls for one family of instruments generally carry over to other sections so that you feel at home with the entire soundset. The system is streamlined so that you can make great music quickly. With only a little practice, you can perform several tasks simultaneously, as a real musician does, so you can hear the musical results as you play. This chapter introduces you to the performance controllers that offer you a wide range of possibilities for musical expression.

Basic Controls (Wind Instruments)

The Real-time Control System (for Brass, Saxes, & Other Wind Instruments)

With a MIDI keyboard it is possible to start making music within minutes of installing JABB. The four basic controls are shown above. Play the keyboard with your right hand. The sharpness of an instrument's attack is controlled by how hard you strike the key. With your left hand, use the modulation wheel to control dynamics and special keyswitch notes that will alter the playing style of the samples (like turning brass mutes on and off). The sustain pedal connects the notes, allowing you to make slurs and legato transitions.

In addition to these four basic controls, JABB features other controls for greater control over your instruments, all of which are user-adjustable. Automatic Variability imparts subtle changes in tuning and timbre. Portamento controls let you continuously glide between notes like string or trombone players. With this controller-based approach, you play your articulations in real time in much the same manner as a real player does.

1. Modulation Wheel Control
(Volume and Expression for Wind Instruments)

Shaping Dynamics & Playing Expressively

One thing that makes a jazz band sound great is dynamic contrast. Every phrase and the notes themselves have unwritten dynamics and nuances that players interpret. Without dynamics, music lacks its depth of expression. Dynamics and expression for the wind instruments in Garritan Jazz & Big Band are achieved through the Mod Wheel. Normally, this controller is mounted on the left side of the keyboard and is played with the left hand. The Mod Wheel simultaneously controls both Volume (*ppp* to *fff*) and Timbre (brightness or tone) for all wind instruments. Especially with the brass instruments, louder levels produce a brighter sound.

> *Get to Know Your Mod Wheel for sustaining instruments like winds and brass instruments.*
>
> The Mod Wheel controls the dynamic ebb and flow of volume and timbre changes. In the case of a sequencer, make sure to record a nudge of the Mod Wheel at the beginning of every MIDI track so that JABB instruments will start with the correct volume upon playback. Remember that in JABB the Mod Wheel is not a "set and forget" controller. It is intended to be used as an expressive controller that is in nearly constant motion, shaping the volume and timbre of a passage. It is analogous to the air being blown through a wind instrument or a bow being drawn across the strings in a stringed instrument.

You will discover that using the Mod Wheel control adds a new dimension of feeling and expression to your performances, making them all the more believable. Try experimenting with the Mod Wheel to develop control over the dynamics. As you play a melody, attempt a gradual crescendo or decrescendo, instead of going suddenly from soft to loud or loud to soft.
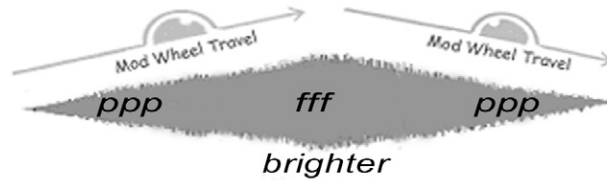
As shown above, the, Modulation Wheel allows you to simulate a surging crescendo/diminuendo

Exercise:

Play a melody with your right hand only and notice how there is little variation at all. It doesn't sing as it should. Now imagine how you would sing the tune. Where is the peak of the phrase? Where would you make a crescendo and a diminuendo? Now, as you play the melody, attempt those crescendos or decrescendos with the Mod Wheel. Listen to the effect as you make gradual changes, adjusting the dynamics to suit your musical sensibilities.

IMPORTANT:

Even though instruments in ARIA load with a default value, it is best to always record Mod Wheel data at the beginning of every MIDI sequence track in order to start with the correct initial volume.

NOTE: In addition to the Mod Wheel (CC#1) JABB instruments will also respond to breath control (CC#2) and MIDI expression (CC#11) to control the function of expressive volume/timbre. Be careful to use only one at a time or the data between these controllers will cause interference. It is not necessary for the user to take any steps to activate these extra controllers. They are always active.

In typical General MIDI soundsets, the Mod Wheel is used to add modulation or vibrato to the sound.

2. Note Velocity
(Attack for Sustain Instruments/ Volume for Rhythm Instruments)

Virtually all keyboards made today support a feature called "Note Velocity" that refers to how fast (or hard) you strike a given key. The harder you press down a key, the harder and sharper the attack. The gentler you hit the key, the softer the attack.

Applying proper accentuation brings clarity and emphasis to the notes being played. It also shapes the rhythm and flow of a piece of music. The degree of force you apply to the keys will vary depending on the instrument selected and the musical context. With brass and woodwinds, accents are made by forceful "tonguing" to emphasize the attack of certain notes. Whenever you feel that a note should be accented, do it by striking the key harder.

It is important to note that this control relates to attack strength and is, for the most part, independent of volume. All wind instruments in Garritan Jazz & Big Band have volume controlled by the Mod Wheel. So, don't always try to play notes louder by banging on the keyboard, or the result may be a heavily accented note that you did not intend. Rhythm instruments (including the piano, guitar, plucked basses, and drum kits) do use note velocity for volume and volume-related timbre changes. The Mod Wheel has no effect on these instruments.

Note:

Instruments which do not sustain their sounds, such as pianos and drums, follow the General MIDI convention using note velocity for dynamic and sustain pedal for sustains.

3. Sustain Pedal (Legato for Sustain Instruments / Sustain for Rhythm Instruments)

Legato—Playing Smoothly and Evenly

So far, we have focused on aspects of performance that are controlled with your fingers, but an important part of your performance comes from your foot. Most keyboards include a sustain pedal. Instruments that can play sustained notes (winds, saxes, and brass) use the sustain pedal to activate the legato playing techniques. "*Legato*" literally means connected and directs the performer to play smoother transitions between notes instead of accenting each one.

Legato is achieved by holding the sustain pedal down for the desired group of notes. Whenever you depress the sustain pedal, the attack portion of the sample is removed to create much smoother transitions between notes. Just like note velocity accents notes to make them sound detached, the legato feature blends notes into an unbroken seamless musical phrase. To get an idea of what the legato sustain function does, consider the following illustration. This is what the waveform of a musical phrase looks like when played on a typical sampler:

Notice how disconnected the notes are. Depressing the sustain pedal removes the attack portion of the sample and connects the notes for smoother sounding effect. Using Mono Mode makes sure there are no overlaps. The result is a phrase that sounds like a real legato phrase.

In the case of brass and wind instruments, notes are tongued when you have your foot off the Sustain pedal. Slurs between notes occur when you hold down the pedal. For instruments actually possessing a sustain pedal (pianos), it functions as you would expect.

Note:

Brass and winds can also be used with the Auto-Legato feature as an alternative to using the sustain pedal. This feature automatically detects note overlaps and applies changes to the attack and decay characteristics of the note transitions. Auto-legato is located in the Control tab of the ARIA Player.

Choosing Between Auto-Legato and Sustain Pedal Legato (CC#64)

Since Garritan Jazz & Big Band gives two choices for legato creation the question arises: Which should I use?

Auto-Legato is the most convenient method to use and can give good results when used as designed. It has some limitations, though. These limitations are related to the way it handles polyphony, which is especially important in the Lite instruments. Its detection of overlapping notes, where it automatically stops the first of the overlapping notes in favor of the second, means that it functions in what is commonly known as "mono mode." This gives automatic transition control and the ability to do easy trills, but it can only play one note at a time. It works well with any single line parts.

All Standard instruments are, by default, in "mono" mode and can only play one note at a time under any circumstances—just like a real instrument using standard performance techniques. So, with these instruments it becomes a choice of convenience and one based on the relative smoothness of the note transitions when comparing the two methods. The CC#64 method of manual legato is more flexible and usually provides a bit smoother transitions but requires more work on the part of the user. With the manual approach it is up to the user to place the CC#64 "switch" data in the MIDI tracks as needed.

In the Lite instruments (which are polyphonic), the sustain pedal method requires the user to precisely determine note overlaps since the amount of note overlap won't be automatically determined the way it is with Auto-Legato. This gives the user greater flexibility in adjusting the sound of the note transitions but demands considerable attention to detail to get the best results. Usually, a combination of carefully chosen note overlaps, CC#64 switching, and CC#21 (release/decay) data will allow the user to craft the smoothest legato note transitions for Lite instruments.

Most users will probably find themselves using a combination of the two types of legato, the choice dictated by convenience, the requirements of the track, and the specific instruments being used in the composition. In the case of single line parts the user may wish to begin by using the convenient Auto-Legato and only change the approach to CC#64 if Auto-Legato is insufficient for the desired results. The two techniques have slightly different sounds. If polyphonic parts are needed from a single instrument then CC#64 using the Lite instruments is the correct choice.

4. Keyswitching (Changing Articulations and Techniques In Real-Time)

Change Articulations In Real-Time

Keyswitching is a feature that allows you to change articulations quickly while playing. With a simple touch of a key located on the keyboard below the playable range of an instrument, you can move between different playing styles without having to load multiple patches. In Garritan Jazz & Big Band, keyswitching is used primarily to switch between mutes for trumpets and trombones. These keyswitch instruments are denoted by **KS** next to their name. All patches initially load using the first keyswitch as the default (no mute—"open") and any keyswitch remains active until another keyswitch message is received.

Here is an example of a typical Keyswitch layout for a trumpet KS instrument.
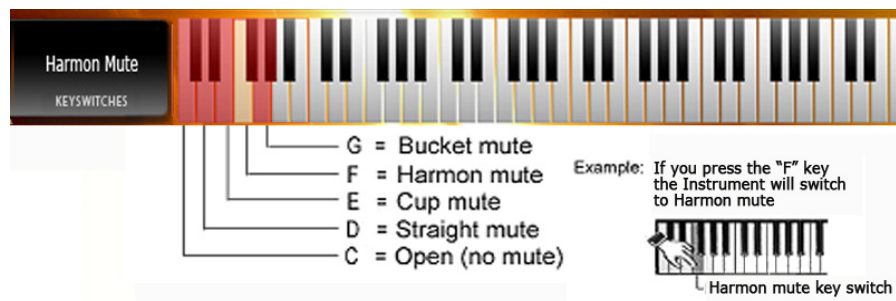
In the ARIA player, the keyswitches are displayed below the instrument's range using the color pink. The selected keyswitch is displayed in yellow and the represented patch is identified in the window to the left of the keyswitches.

Although it may be tempting to use your mouse to trigger one of the displayed Keyswitches in the ARIA player, it is seldom recommended. The player's graphic representations of keys, wheels, and knobs are primarily there for convenient testing. Be advised that if you use the mouse to trigger a key switch you want to record to a sequencer track or notation staff—the mouse action will not be recorded! When recording a track or entering notation, use your external MIDI keyboard to record the key switch note or manually enter the key switch note into your tracks.

Keyswitch Tips:

- Always put the keyswitching note for the particular instrument 'before' the first note of the articulation you want to play, not at the same time!
- If you transpose your score, you must be sure not to transpose the KS notes!! Any transposition to these notes will change (or eliminate) their function.
- Although it may be tempting to use your mouse to trigger one of the displayed keyswitches in the ARIA Player, it is seldom recommended. The Player's graphic representations of keys, wheels, and knobs are primarily there for auditioning sounds.

5. Additional Controls:

In addition to the four basic controls, there are many other ways you can fine-tune your Jazz & Big Band performances.

Pitch Bend Wheel: This control can be used to bend the pitch of a note at its start or while it is sustaining. It is especially useful for trombone and guitar. For wind instruments the pitchbend range is limited to +/-2 semitones to give the user subtle control over scoops, bends, and other important effects, while avoiding such artifacts as formant displacement. Note that the Notation folder instruments have a consistent pitchbend range of +/-12 semitones for compatibility with various notation software.

Pitch Bend Defeat: CC#19 can be used to turn off pitch bend so that bend data can be applied to only one of two overlapping notes, if desired.

Automatic Variability Controls (CC#22 & CC#23): These controls automatically create tuning and timbre variability from note to note. The VAR 1 knob controls intonation with random tuning variations, adjustable from a few cents to an entire semitone. The VAR2 knob introduces random variations in timbre quality by adjusting a filter on the instrument. The combination of both controls provides a more human result in the quality of the sound. The VAR 1 and VAR 2 controls can also be adjusted or varied throughout a piece by using MIDI controllers CC#22 and CC#23, respectively. See the chapter on ARIA Player Operation for additional information on this feature.

Portamento Control (CC#20): This control is related to pitch bend above and will allow you to slide from note to note. This is particularly helpful with some instruments, such as the trombone. There is a knob that adjusts the portamento for instruments that use this function. Additionally, MIDI controller CC#20 can be assigned to an external MIDI fader or drawn as graphic data in your sequencer of choice. Portamento is off by default. In general, slides between smaller intervals require greater values than slides between larger intervals. It is best to draw the data manually (for any specific notes that require slides) in your sequencer or to assign this feature to a separate hardware controller (CC#20) for real-time control. You can also add varying amounts of portamento for smooth portamento effects (play two notes in a row and one will glide into the other).

Important note:

Portamento is only active in legato mode. This means that it requires a sustain pedal down command to be in effect (cc64, value 127) or auto-legato engaged and notes overlapping.

Length Control (CC#21): The default length is the natural release/decay length of the sample. As you adjust MIDI controller CC #21, the length of the release/decay of the sample can be varied over a useful range. This can be used along with MIDI note length data and velocity strength to give a wider variety of articulation types ranging from very short and light to accented and forceful. It can also give control of note releases in legato situations by lengthening releases for smoother overlaps. With wind instruments, very short staccato notes can help create the illusion of double and triple tonguing.

Vibrato Control: Wind and brass instruments have vibrato control. There are two vibrato controllers: Aftertouch (controls vibrato intensity) and MIDI controller CC#17 (controls the vibrato speed). Because both components of the vibrato are independent, vibrato can be added to an instrument with natural variations in entrance timing, speed variations, and intensity.

- **Hidden Aftertouch (Channel Pressure) Vibrato Intensity:** Many keyboards send Aftertouch data when finger pressure on a key is varied while the key is held. Aftertouch data is used to adjust the vibrato intensity of a NonVib instrument. This controller data can also be "drawn" into MIDI tracks manually.
- **Vibrato Speed Controller (CC#17):** This controller, when used in conjunction with Aftertouch, will vary the vibrato speed. CC#17 can be assigned to an available slider or knob on a hardware keyboard to give real-time control. This controller data can also be "drawn" into MIDI tracks manually.

It is important to be aware that the vibrato features do **not** apply to any instruments with naturally recorded vibrato in the samples (such as stringed instruments). Instruments that have vibrato control will display a knob labeled "VibSpd(CC#17)" in the Instrument Controls on the Controls tab of the interface.

Note:

M-Audio and some other keyboards often use CC#131 as a substitute for Aftertouch when the keyboard model doesn't have Aftertouch sensitivity built in. A programmable slider on the keyboard can be assigned to CC#131 and the keyboard will output Aftertouch data.

Air Flow Noise (CC#12): MIDI controller CC#12 controls the sound of the air column moving through the instrument. This can be used for many things, from creating a "breathy" sound adding a little subtle "grit" to the tone. This sound is tied to the amplitude portion of the Vibrato control so that the air flow will pulsate in synchronization with the speed of the Vibrato. The default setting is off.

Key Click/Valve Noise (CC#13): MIDI controller CC#13 controls the level of the noise produced by the key or valve mechanism of the wind instrument. A little of this goes a long way. Use it mostly for subtle enhancement of exposed solo work. These types of noises are rarely heard in section work where they are masked by other things. The default setting is off.

Flutter Tongue/Growl sound (CC#18): MIDI controller CC#18 controls the level of the flutter tongue or "growl" effect. The default setting is off.

Tone Quality control (CC#26 & CC#27): MIDI controller CC#26 controls the basic warmth of the tone quality. It is set by default to a useful value but **CC#27** allows the user to modify the center frequency of this EQ function, if desired. Be careful not to modify the center frequency while a note is being sustained or you may get unnatural "sweep" artifacts. It is best set to a value for an entire track.

Breath noises: All wind instruments have samples of the player taking a breath, which can be inserted at phrase breaks in your tracks to add another touch of realism. There are a variety of breath types **mapped to the top two octaves of the keyboard**. They include quick "catch" breaths and more leisurely slow breaths to be applied in different situations.

Mono Mode in Horns: All horns are programmed to be monophonic-only instruments. They only play one note at a time, like real horns being played with normal techniques. Limiting the polyphony to a single voice makes the creation of convincing solo parts much easier, as it eliminates the possibility of accidental note overlaps. In fact, the tongue/slur programming would not work properly without this. If you need polyphonic performance from a single instrument choose the instruments in the Lite folder. Lite wind instruments are all polyphonic.

Advanced: Specific Instrument Controls

Specific Controls for Brass Instruments:

Shakes: JABB brass instruments have special shakes programming that can be switched on when needed. It does not automatically create shakes but rather supplies a number of controllers that can be used to effectively adjust various elements of the sound to help simulate slurred motion between natural harmonics. The controllers used for this purpose are as follows:

CC#64 (value 49-95)	shakes layer on/off switch
CC#20	portamento (continuous)
CC#21	release envelope speed (continuous)
CC#28	attack envelope speed (continuous)
Velocity	volume trim

Once the MIDI controller CC#64 switch is set to a value between 49 and 95, the other controllers give you sufficient control over the various aspects of the transitions between notes to create convincing shakes of any interval. At the end of a shake the above controllers can be supplemented with CC#15 for release effects (switched for falloff, doit, kiss) and CC#29 for release effect volume level. The practical application of these controllers is explained in detail in a tutorial available at the Garritan web site.

This feature has always been a very flexible but difficult and involved one to use so we have taken steps in the new JABB-ARIA to make the creation of shakes much easier for the user.

Auto Shakes: Auto shakes use a mid value of the Auto Legato controller (**CC#102**.) With this feature the only additional controllers you need are:

CC#102 (value 49-95)	auto shakes layer on/off switch
CC#15	release effect (switched for falloff, doit, kiss)
CC#29	release effect level, when needed at the end of a shake.

Once this switch is activated all additional shakes controller calculations (except release effects) are generated automatically and the shakes can be played in real time using the trill technique for auto

legato! Just hold the first note of the shake while repeatedly playing and releasing the upper note of the intended interval of the shake. Shake behavior will automatically be appropriate for the chosen range and intervals. In sequencing, just place the mid-value CC#102 data prior to the notes you wish to "shake," place the notes of the shake in your track, and overlap them slightly. Don't forget to return the switch to the off position after the last note of the shake by placing appropriate data in the track (CC#102, value 0.) As a result, a technique that used to take a considerable amount of time can now be accomplished in just a few seconds!

Note:

As a convenience, when Auto Shakes are switched "on" the release effects will automatically be reset to off (cc15, value 0) with the occurrence of each new note. This means that you only need to put in cc15 data to turn on the desired release effect for a particular note. You do not need to place another piece of data to turn the release effect off in advance of the following note.

Plunger Mute (CC#16): There are two instruments in the library (one trumpet and one trombone) that use filtering to simulate plunger mute effects. MIDI controller CC#16 controls the "open/close" action of the mute.

Additional Features in Just the Trumpets:

Release Effects (CC#15): Trumpets in a jazz context often release notes in unusual ways. The three most common are: "falloffs," "doits," and "kisses." In Jazz & Big Band these effects can be chosen with **CC#15**. They are switched as follows:

Value 0-32	Off
Value 33-64	Falloffs
Value 65-95	Doits
Value 96-127	Kisses

The Falloffs and Doits apply to a 2 octave area of the trumpet range. The Kisses apply to only the high concert Bb and above. Notes that lie outside the specified range will give no effects. This is not a malfunction. See the chart for range information.

Note: The above features apply to the trumpets but similar effects can apply to the trombones as well. Since trombones usually accomplish falloff and doit-like effects with the slide, pitchbend is used for this purpose in Jazz and Big Band. Trombones do not tend to use kisses on high notes so that feature has been omitted for trombones.

Note: The order of brass instruments in JABB (Trumpet 1, Trumpet 2, etc.) is of no particular significance. The instruments vary in tone and should be auditioned to determine the one most appropriate for a particular application. As an example: Each one of the trumpets could be used for the lead trumpet part (within range considerations) and each will sound somewhat different from the others.

Specific Controls for the Rhythm Section

Basses

The library contains two upright plucked acoustic basses, one upright bowed acoustic bass, two fretless electric jazz basses, and two fretted electric Jazz basses. It should be noted that Upright Bass #2 is contributed by the inimitable Chuck Israels! Controllers for the basses include:

Velocity	Volume
Pitchbend	+/-2 semitones
Aftertouch	Vibrato intensity (except Upright arco which has recorded vibrato)
CC#12	Fundamental intensity (strength of the "bottom end" of the instrument sound)
CC#13	Finger noises (adds finger noises like clicks and snaps – velocity sensitive)
CC#17	Vibrato speed (except Upright arco which has recorded vibrato)
CC#18	Attack speed (affects the sharpness of the attack)
CC#20	Portamento (controls slides between notes)
CC#21	Length (controls the length of the decay of the notes)
CC#22	VAR 1 (adds random variations in tuning from note to note)
CC#23	VAR 2 (adds random variations in timbre from note to note)
CC#26	Midrange EQ (a midrange tone control)
CC#27	Midrange center frequency (adjusts the character of the midrange tone control)
CC#28	High frequency EQ (a high frequency tone control)

Additional controllers for the upright acoustic basses:

Keyswitches for open strings (only open strings sound)	
Special mapping: C5-E5	Finger slide noises can be inserted using notes beyond the upper range of the instrument.

Additional controllers for the arco upright bass:

Mod wheel		Volume/timbre
Velocity		Attack strength
Sustain pedal		Legato
CC#19		Pitchbend defeat
Key switches:	C-1	Arco
	D-1	Automatically alternating up and down bows
	G-1	Playable tremolos

Additional controller for the electric and slap basses:

Key switches:	C0	standard plucks (electric basses only)
	D0	harmonics (electric basses only)
Special mapping: C5-E5		finger slide noises

Keyboards

Keyboard choices include a Steinway Model B piano, a vintage electric piano, jazz accordion and a selection of organs.

The Steinway Jazz Piano is included in two versions: A full version and a "lite" version for those who need to conserve memory. Both pianos have a brightness control to adjust the high frequency content of the instrument for adapting to different mixing situations. The pianos use the following controllers:

Velocity	Volume/timbre
Sustain pedal (cc64)	Standard Sustain pedal
CC#20	Brightness
CC#21	Release Length
Pitchbend	Ranges set to"0" by default

The Vintage Electric Piano is one of the most popular suitcase-style instruments. The tremolo effect modulates between stereo speakers in the support base of the keyboard. It uses the following controllers:

Velocity	Volume/timbre
Sustain Pedal (cc64)	Standard Sustain
Pitchbend	Ranges set to"0" by default
CC#22	Tremolo level
CC#23	Tremolo speed
CC#26	Midrange intensity
CC#28	Brightness

Organs

The organ is sometimes used as a substitute for or in addition to the piano. We have included a variety of organ sounds that can be used individually or stacked (two or more responding to the same MIDI data simultaneously). These also have tremolo controls. The organs use the same controllers as the electric piano above, but differ by using the Mod Wheel instead of velocity to control the volume.

Vibraphones

Vibraphones are available in both hard and soft mallet choices. Both use the following controllers:

Velocity	Volume/timbre
Sustain pedal (CC#64)	Standard Sustain
Pitchbend	Ranges set to"0" by default
CC#20	Attack speed
CC#21	Brightness
CC#22	Tremolo intensity
CC#23	Tremolo speed

Guitars and Banjo

There are both acoustic and electric guitars. The acoustic guitar is a 10-string model that is recorded in stereo. The electric guitar and banjo are recorded monaurally. Both guitars and the banjo have been programmed with the future implementation of scripting in mind to create realistic strumming and other techniques. Controllers for guitars and banjo are as follows:

Velocity		Volume/timbre
Sustain Pedal (CC#64)		Standard Sustain
Pitchbend		+/-2 semitones
Aftertouch		Vibrato intensity
CC#13		Finger noise intensity
CC#17		Vibrato speed
CC#20		Portamento
CC#21		Length
CC#22		VAR 1
CC#23		VAR 2
Keyswitches:	**C0**	standard plucks (guitars only)
	D0	harmonics (guitars only)
Special mapping: C7-D#8		slides, taps, slaps

Tip: The guitars (especially the electric guitar) can be used with amp, tube, distortion, and other audio plugins to greatly modify the basic sound of the instrument. These plugins are often included with sequencing software or are available separately from third-party developers.

Drums

The drums are recorded "in place" in true stereo using an ORTF microphone arrangement for all instruments except the bass drum. There are three distinctly different drum kits included, with specific purposes for each. There is the **Classic Jazz kit** which uses vintage single layer heads for the sound that is so closely associated with the great tradition of jazz drummers; there is a **Fusion kit** that uses double layer heads for the tighter, drier sound that has become popular in the last few decades; and there is a unique **Brush drum kit** (played with wire brushes) that will give you the ability to do ballads and other brush grooves that were extremely difficult to accomplish with previous libraries.

There are complete kits for convenient sketching and separate bass drum, snare, toms, hi-hat, and cymbals for more detailed mixing treatment.

Note: The same Cymbal files are duplicated in each of the drum folders for user convenience. The cymbal files contain a wide variety of cymbal choices for many possible uses.

Note:

The hi-hat is divided into closed, half-open, open, and foot-closed samples. All of these are assigned to an exclusive group so that any sample in the group will be cut off by another sample in the group. For example, if you hit the open hi hat and then quickly hit the foot closed hi hat, the open hi hat will stop sounding as soon as the foot closed sample begins.

There are three **General MIDI kits**: One for Classic Jazz, a brush kit and one for Fusion. The layout follows the General MIDI specifications with one exception: The snare drum on MIDI note 40 is an acoustic, not an electric, snare. The two General MIDI kits have identical percussion samples. Only the bass drum, snare, toms, and hi-hat differ.

Note:

See appendix for detailed mapping information.

The Primary Controller for All the Drums is:

Velocity	Volume/timbre

Other controllers:

CC#22	VAR1 (Random variations in intonation)
CC#23	VAR2 (Random variations in timbre)
Pitchbend	+/-12 semitones
Note A0	Used to "choke" cymbals
Level Knobs	Volume control of the various parts of the kit (kick, snare, toms, hihat, cymbals and percussion, when present.

The Brush Drum Kit: This is a special case. We think you will find the brush drum kit one of the most enjoyable instruments in the Jazz & Big Band library. It has some very intuitive and flexible features. Most of the previous attempts to sample brush drum kits have relied on recording the characteristic snare drum "stirs" at a variety of different tempi, and left it up to the user to choose the particular recorded performance that most closely matched the desired tempo. Constructing a brush drum part was more like assembling an elaborate puzzle than playing music. The brush drum kit in Jazz & Big Band is completely different. The snare drum stirs are actually playable at any tempo and you will find playing the stirs easy and intuitive (not to mention fun). This kit contains two snare drums with stirs and hits, plus brush hits on toms, hi-hats, and cymbals.

Snare Drum Brush Stirs:
Garritan Jazz & Big Band has a unique ability to play stirs.

Note C#1 (midi note #37)	Initiates the continuous brush stir sound
Velocity	Strength of the first brush push
Aftertouch	Change of stir direction
Note A0	Used to "choke' cymbals
Level Knobs	Volume control of the various parts of the kit (kick, snare, toms, hi hat, cymbals and percussion, when present.

In Jazz & Big Band, stirs are best played from a keyboard that supports **Aftertouch**. A stir begins as soon as the **C#1** note is depressed and held. The strength of the initial push of the brush stir is directly related to how hard the key is struck (velocity.) The stir will continue as long as the key is held but one of the most important characteristics of the brush stir is the figure 8 pattern used between hands and the brush *direction change* that takes place during this pattern. In Jazz & Big Band the direction change can be made at any time by briefly pressing harder on the held MIDI note C#1. Press just long enough to simulate the direction change and then quickly reduce the pressure on the key without releasing it. With a little practice, and some careful listening to real brush work, you will be able to simulate brush stirs with uncanny accuracy and ease. All of the data can be recorded to your sequencer tracks, so you will be able to edit the stirs with as much attention to detail as you wish. Because the stirs reside in the tracks as note and Aftertouch data, many things can be modified including the tempo—at any time. If you decide that you want your piece of music to be 150BPM rather than 130BPM, just change the sequencer tempo data and the stirs will follow the tempo change. It

will even follow continuous changes in tempo if you like. There are virtually no tempo limits, except those that would apply to a real player (if you push the tempo faster than a real player could manage, the results will likely sound rather odd.) If you don't have a keyboard with Aftertouch support, the Aftertouch data can be assigned to a hardware fader or knob. It could also be drawn directly into your snare drum track using the tools in your sequencer.

Percussion:

A wide variety of percussion instruments are available in the library. Most use three separate types of hits (open, muff, and slap) so you can build rhythmic patterns with the instrument's characteristic sounds. Percussion instruments are mapped so that instruments within specified families can be combined without overlap conflicts using just two MIDI channels. All instruments in the Drum and Gourd categories can be combined on the same MIDI channel. All instruments in the Blocks, Bells, and Misc. categories can be combined into a second MIDI channel. See the chart in the appendix for details. Percussion instruments are loaded individually to give the user independent control over panning, levels, and other mixing decisions.

CYMBAL "CHOKE" FUNCTION:

All instruments that contain cymbals use the A0 key (MIDI note #33) just below the range of the instrument to damp or "choke" the sound of a sustaining cymbal. When the A0 key is depressed it abruptly halts any ringing of the cymbal.

> *Note:*
>
> Many of the percussion instruments use programming to introduce automatic random variations between hits. Each hit will sound somewhat different even if the velocity value is the same.

GENERAL MIDI KITS:

Classic Jazz, Fusion, and Brush kits are supplied that follow General MIDI conventions, although the Brush Kit departs from the standard so that the special brush stir features can be used. The departure affects MIDI note Note C#1. Note C#1 is the brush stir sound.

The following chart describes the controllers in the Garritan Jazz & Big Band library:

GARRITAN JAZZ & BIG BAND Reference Sheet — Concept: Chris Bassett

ALL WINDS

Primary Controls

Control	Function
CC#1(Mod)	Volume/Expression
CC#64(Sus)	Tongue / Slur
Velocity	Attack/Accentuation
Pitch Wheel	Bend (+/- 2 semitones)
Auto Legato	Auto Tongue/Slur

ExpressiveControls

Control	Function
Aftertouch	Vibrato
CC#17	Vibrato Speed
CC#12	Air Flow Noise
CC#13	Key Click/ Valve Noise
CC#18	Flutter tongue/ Growl

*Breath noises in top 2 octaves

Tweaking Controls

Control	Function
CC#19	Pitch Bend Defeat
CC#20	Portamento Control
CC#21	Length control
CC#22	Var 1 (Intonation)
CC#23	Var 2 (Timbre)
CC#26	Tone Quality (Warmth)
CC#27	Tone quality (adjust sweet spot)

BRASS

Keyswitching (KS Patches)

C=Open	D = Straight Mute	E = Cup Mute	F = Harmon Mute	G = Bucket Mute

Brass Shakes

Control	Function
CC#64	Values 49-95) Brass Shakes
Vel.	Trim Volume
CC#28	Attack Speed
CC#20	Portamento
CC#64 (mid values)	Auto shakes Option

Plunger Mute Instruments

Control	Function
CC#16	Plunger Open/ Close

Shakes Pitchbend = +/- 6 Semitones
Trombone Pitchbend = +/- 6 Semitones

Trumpet Release (CC#15)

Value	Function
0-32	Off
33-64	Falloffs (High Range Only)
65-95	Doits (High Range Only)
96-127	Kisses (High Bb and above)

RHYTHM

All Basses

Control	Function
CC#12	Fundamental Intensity
CC#13	Finger Noises
CC#18	Attack Speed (Sharpness)
CC#20	Portamento
CC#21	Length
CC#11	Var 1 (Intonation)
CC#23	Var 2 (Timbre)
CC#26	Midrange EQ
CC#27	Midrange Center Frequency
CC#28	High Frequency EQ

Electric Bass

Control	Function
C0 (KS)	Pluck
D0 (KS)	Harmonics
C5-E5	Finger Slide Noise

Slap Bass

Control	Function
C5-E5	Finger Slide Noise

Upright Acoustic Bass

Control	Function
Sus Pedal	Open Strings
C5-E5	Finger Slide Noise

Arco Upright Bass

Control	Function
Sus Pedal	Legato
CC#19	Pitchbend Defeat
C1 (KS)	Arco
D1 (KS)	Alternate up/dwn bow
G1 (KS)	Playable Tremolo

Guitars

Control	Function
Aftertouch	Vibrato Intensity
CC#17	Vibrato Speed
CC#20	Portamento
CC#21	Length
CC#22	Var 1 (Intonation)
CC#23	Var 2 (Timber)
C0 (KS)	Standard Plucks
D0 (KS)	Harmonics
C7-D#8	Slides, Taps, Slaps

Organs

Control	Function
CC#20	Attack
CC#22	Tremolo Level
CC#23	Tremolo Speed
CC#26	Midrange EQ
CC#28	Hi Frequency EQ

Vintage Electric Piano

Control	Function
CC#22	Tremolo Level
CC#23	Tremolo Speed
CC#26	Midrange EQ
CC#28	Brightness

Jazz Piano

Control	Function
CC#20	Brightness

Accordion

Control	Function
CC#12	Bellows

Vibraphone

Control	Function
CC#20	Attack Speed
CC#21	Brightness
CC#22	Tremolo Intensity
CC#23	Tremolo Speed

All Bass Drums

Control	Function
CC#12	Fundamental Strength
CC#28	Beater Head Slap Strength

Brush Kit

Control	Function
CC#1	Continuous Stir
Velocity	First Push Strength
Aftertouch	Stir Direction Change

Notation Version of Jazz & Big Band

The Jazz & Big Band Library contains a separate Notation folder with instruments that are programmed with important differences which make them more compatible with the way most notation programs handle MIDI data.

The programming differences are:

- **Tongue/slur**—controlled by CC#68 rather than CC#64. This difference applies to all woodwinds and brass instruments. Please note that instruments which normally use standard sustain pedal (e.g. Piano) continue to use CC#64 for the sustain function.
- **Pitchbend range**—extended to +/-12 semitones for all instruments.
- **Keyswitches**—All notation version keyswitches consistently reside in the bottom octave of the MIDI spec (between C-2 and B-2) for all instruments.

Putting It All Together for a Real-Time Performance

The basic system is to use your right hand to control the attack of each note—use the Mod Wheel in the left hand to control dynamics, and play the sustain pedal with your foot to connect the notes. It couldn't be easier! With the more advanced controls you can fine-tune your performance. This approach lets you play your articulations in real time in much the same manner as a player of the actual instrument does.

Using both hands and feet to perform the different tasks simultaneously requires some coordination. The key is to start simple and to realize that you do not have to do it perfectly the first time. The best way to learn is to practice playing just the notes with one hand. Learn the fingerings for the notes and apply the accents, where appropriate. Once you are acquainted with the notes and the accentuation scheme, gradually add the other controllers. For example, play a melody with the right hand. After a few practice runs try riding the Mod Wheel for expression too. Then add the sustain pedal for legato phrasing. Soon you'll develop coordination, and by combining the different controls in real-time you'll have an unlimited amount of expressive capabilities. Once you get the hang of it, you can play almost anything that comes to your musical imagination. Create ensembles of your choosing with individual instruments. By using the real-time performance controls to play each instrument expressively, the final result can be extraordinary.

Building Ensembles from Individual Instruments

With Garritan Jazz & Big Band, you can build instrumental sections, one instrument at a time, exactly the way you want. This is a unique and intuitive approach to jazz arrangement using samples. When you create a section from separate instruments performed individually, with variations in timing and expression, you can achieve a very realistic performance. You can assign instruments of a section to different MIDI channels so that you can have individual parts for each player. Or, you can assign multiple instruments all to a single MIDI channel to create automatic ensemble unisons.

When you start building sections from separate instruments, with all the instruments playing individually, it will sound incredibly realistic. To learn more see the Ensemble Building tutorials on the **www.garritan.com** website.

The JABB ARIA installation includes a folder/directory called "Ensembles" that contains a collection of useful, pre-configured instrumental combinations for the convenience of the user. Loading an Ensemble can give you a head start to setting up a jazz ensemble or a big band. Each file loads a selection of instruments (e.g. Big Band) along with pan, level, and other settings

Directory of Instruments in Garritan Jazz & Big Band

The following directory gives the name and a brief description of the Garritan Jazz & Big Band instrument sounds. There is also a chart of the available controllers for each instrument.

CONTROLLERS	
MW	Mod Wheel Expression Control
SusLeg	Sustain Pedal legato control
AutoLeg	Auto Legato control
Sus (sus)	Sustain Pedal for normal sustain control
SusDp	Sustain Pedal with damping control
Vel	Note Velocity for Accents and Attack
Vel (vol)	Note Velocity for Volume control
VAR 1	Automatic variability of intonation
VAR 2	Automatic variability of timbre
TNG/SLR	Sustain Pedal tongue/slur control
FLTR/GRL	Flutter tongue/ Growl
Length	Sample release time
KS	Keyswitching
Vib	Vibrato control
AG	Aggressiveness of tone
At	Attack envelope speed
Port	Portamento control
TQ	Tone Quality adjustment
TRM	Tremolo
TL	Tremolo level
TS	Tremolo speed
BRTH	Breath sounds
SK	Shakes
BRSH	Brush stirs
PLGR	Plunger mute
FL	Filter gain level
FF	Filter center frequency
Bl	Bellows noise
Plr	Player Instrument. Note: Plr instruments are lighter versions and do not share samples with each other. However, to avoid phasing issues they should not be used with the solo instruments from which they are derived; e.g. don't use Flute 1 Plr1*, Plr2*, or Plr3* with the Flute Solo instruments.

For detailed information about the controllers, please refer to the chapter entitled "Playing Jazz & Big Band Instruments."

Ensembles Files

The JABB ARIA installation includes a folder/directory called "Ensembles" that contains a collection of useful, pre-configured instrumental combinations for your convenience. Various setups of sections and instrument groupings are listed in the table below. Loading an Ensemble can give you a quick "head start" to setting up a group of instruments. Each file loads a selection of instruments along with pan, level, and other settings. The Ensembles folder can be found in the folder where JABB was installed. The default location is: /Garritan/Jazz and Big Band 3/Ensembles.

ENSEMBLES:	
Ensemble name:	**Instruments Included:**
01 Big Band Rhythm Section	Steinway Jazz Piano; Electric Guitar KS; Upright Bass 2 KS; GM Classic Jazz Drum Kit
02 Big Band Rhythm Section Lite	Steinway Jazz Piano Lite; Electric Guitar KS Lite; Upright Bass 2 KS Lite; GM Classic Jazz Drum Kit Lite
03 Fusion Quartet	Tenor Sax 1 KS Comb; Vintage Electric Piano; Fretless Bass 1 KS; GM Fusion Drum Kit
04 Fusion Quartet Lite	Tenor Sax 1 Lite; Vintage Electric Piano Lite; Fretless Bass 1 KS Lite; GM Fusion Drum Kit Lite
05 Jazz Piano Trio	Steinway Jazz Piano; Upright Bass 2 KS; GM Classic Jazz Drum Kit
06 Jazz Piano Trio Lite	Steinway Jazz Piano Lite; Upright Bass 2 KS Lite; GM Classic Jazz Drum Kit Lite
07 Jazz Quintet	Trumpet 5 KS Comb; Tenor Sax 1 KS Comb; Steinway Jazz Piano; Upright Bass 2 KS; GM Classic Jazz Drum Kit
08 Jazz Quartet Lite	Trumpet 5 KS Lite; Tenor Sax 1 Lite; Steinway Jazz Piano Lite; Upright Bass 2 KS Lite; GM Classic Jazz Drum Kit Lite
09 Jazz Sextet	Trumpet 5 KS Comb; Tenor Sax 1 KS Comb; Trombone 4 KS; Steinway Jazz Piano; Upright Bass 2 KS; GM Classic Jazz Drum Kit
10 Jazz Sextet Lite	Trumpet 5 KS Lite; Tenor Sax 1 Lite; Trombone 4 KS Lite; Steinway Jazz Piano Lite; Upright Bass 2 KS Lite; GM Classic Jazz Drum Kit Lite
11 Sax Section	Alto Sax 1 KS Comb; Alto Sax 2 KS Comb; Tenor Sax 1 KS Comb; Tenor Sax 2 KS Comb; Bari Sax 1 KS Comb
12 Sax Section Lite	Alto Sax 1 Lite; Alto Sax 2 Lite; Tenor Sax 1 Lite; Tenor Sax 2 Lite; Bari Sax 1 Lite
13 Trombone Section	Trombone 1 KS; Trombone 2 KS; Trombone 3 KS; Trombone 4 KS; Trombone 5 KS; Bass Trombone KS
14 Trombone Section Lite	Trombone 1 KS Lite; Trombone 2 KS Lite; Trombone 3 KS Lite; Trombone 4 KS Lite; Trombone 5 KS Lite; Bass Trombone KS Lite
15 Trumpet Section	Trumpet 1 KS Comb; Trumpet 2 KS Comb; Trumpet 3 KS Comb; Trumpet 4 KS Comb; Trumpet 5 KS Comb
16 Trumpet Section Lite	Trumpet 1 KS Lite; Trumpet 2 KS Lite; Trumpet 3 KS Lite; Trumpet 4 KS Lite; Trumpet 5 KS Lite

Ensembles Files (continued)

ENSEMBLES:	
17 Trumpet and Trombone Sections	Trumpet 1 KS Comb; Trumpet 2 KS Comb; Trumpet 3 KS Comb; Trumpet 4 KS Comb; Trumpet 5 KS Comb; Trombone 1 KS; Trombone 2 KS; Trombone 3 KS; Trombone 4 KS; Trombone 5 KS; Bass Trombone KS
18 Trumpet and Trombone Sections Lite	Trumpet 1 KS Lite; Trumpet 2 KS Lite; Trumpet 3 KS Lite; Trumpet 4 KS Lite; Trumpet 5 KS Lite; Trombone 1 KS Lite; Trombone 2 KS Lite; Trombone 3 KS Lite; Trombone 4 KS Lite; Trombone 5 KS Lite; Bass Trombone KS Lite
19 Vibraphone Quartet	Vibraphone KS; Electric Guitar Mellow KS; Upright Bass 1 KS; GM Classic Jazz Drum Kit
20 Vibraphone Quartet Lite	Vibraphone KS Lite; Electric Guitar Mellow KS Lite; Upright Bass 1 KS Lite; GM Classic Jazz Drum Kit Lite
21 Accordion Trio	Accordion; Acoustic Guitar KS; Upright Bass 2 KS
22 Accordion Trio Lite	Accordion Lite; Acoustic Guitar KS Lite; Upright Bass 2 KS Lite
23 Rhythm & Blues Band	Trumpet 1 Open; Trombone 1 Open; Tenor Sax 1; Bari Sax 1; Organ 7; Fretless Bass 2 KS; GM Fusion Drum Kit
24 Rhythm & Blues Band Lite	Trumpet 1 Open Lite; Trombone 1 Open Lite; Tenor Sax 1 Lite; Bari Sax 1 Lite; Organ 7 Lite; Fretless Bass 2 KS Lite; GM Fusion Drum Kit Lite
25 Funk Rhythm Section	Vintage Electric Piano; Organ 7; Electric Guitar KS; Slap Bass 1; GM Fusion Drum Kit
26 Funk Rhythm Section Lite	Vintage Electric Piano Lite; Organ 7 Lite; Electric Guitar KS Lite; Slap Bass 1 Lite; GM Fusion Drum Kit Lite
27 Big Band #1	Alto Sax 1 KS Comb; Tenor Sax 1 KS Comb; Bari Sax 1 KS Comb; Trombone 1 KS; Trombone 2 KS; Trumpet 1 KS Comb; Trumpet 2 KS Comb; Trumpet 3 KS Comb; Vintage Electric Piano; Fretless Bass 1 KS; GM Fusion Drum Kit
28 Big Band #1 Lite	Alto Sax 1 Lite; Tenor Sax 1 Lite; Bari Sax 1 Lite; Trombone 1 KS Lite; Trombone 2 KS Lite; Trumpet 1 KS Lite; Trumpet 2 KS Lite; Trumpet 3 KS Lite; Vintage Electric Piano Lite; Fretless Bass 1 KS Lite; GM Fusion Drum Kit Lite
29 Big Band #2	Alto Sax 1 Comb; Tenor Sax 1 Comb; Tenor Sax 2 Comb; Bari Sax 1 Comb; Trombone 1 KS; Trombone 2 KS; Bass Trombone KS; Trumpet 1 KS Comb; Trumpet 2 KS Comb; Trumpet 3 KS Comb; Vintage Electric Piano; Electric Guitar KS; Fretless Bass 1 KS; GM Fusion Drum Kit
30 Big Band #2 Lite	Alto Sax 1 Lite; Tenor Sax 1 Lite; Tenor Sax 2 Lite; Bari Sax 1 Lite; Trombone 1 KS Lite; Trombone 2 KS Lite; Bass Trombone KS Lite; Trumpet 1 KS Lite; Trumpet 2 KS Lite; Trumpet 3 KS Lite; Vintage Electric Piano Lite; Electric Guitar KS Lite; Fretless Bass 1 KS Lite; GM Fusion Drum Kit Lite
31 Big Band #3	Alto Sax 1 KS Comb; Alto Sax 2 KS Comb; Tenor Sax 1 KS Comb; Tenor Sax 2 KS Comb; Bari Sax 1 KS Comb; Trombone 1 KS; Trombone 2 KS; Bass Trombone KS; Trumpet 1 KS Comb; Trumpet 2 KS Comb; Trumpet 3 KS Comb; Trumpet 4 KS Comb; Vintage Electric Piano; Electric Guitar KS; Fretless Bass 1 KS ; GM Classic Jazz Drum Kit
32 Big Band #3 Lite	Alto Sax 1 Lite; Alto Sax 2 Lite; Tenor Sax 1 Lite; Tenor Sax 2 Lite; Bari Sax 1 Lite; Trombone 1 KS Lite; Trombone 2 KS Lite; Bass Trombone KS Lite; Trumpet 1 KS Lite; Trumpet 2 KS Lite; Trumpet 3 KS Lite; Trumpet 4 KS Lite; Vintage Electric Piano Lite; Electric Guitar KS Lite; Fretless Bass KS Lite; GM Classic Jazz Drum Kit Lite
33 Big Band #4	Alto Sax 1 KS Comb; Alto Sax 2 KS Comb; Tenor Sax 1 KS Comb; Tenor Sax 2 KS Comb; Bari Sax 1 KS Comb; Trombone 1 KS; Trombone 2 KS; Bass Trombone KS; Trumpet 1 KS Comb; Trumpet 2 KS Comb; Trumpet 3 KS Comb; Trumpet 4 KS Comb; Steinway Jazz Piano; Electric Guitar KS; Upright Bass 2 KS; GM Classic Jazz Drum Kit
34 Big Band #4 Lite	Same as above with Lite instruments

Loading Ensemble Files

There are several ways to load Ensemble files:

- Load from the Ensemble Manager in the upper left box of the ARIA interface.
- Drag and Drop or Load from the File menu (File/Load).

The Ensemble Manager slot is an easy way to load ensembles.   When you click on the slot in the Ensemble Manager in the upper left corner of the ARIA interface, you will see a JABB drop-down menu which will contail all of the Ensemble presets. Alternatively, you can open the "Ensembles" older/directory to display the numbered collection of ensemble files. Using the mouse button, click and drag the file you wish to load. The instruments and their configurations will load automatically.
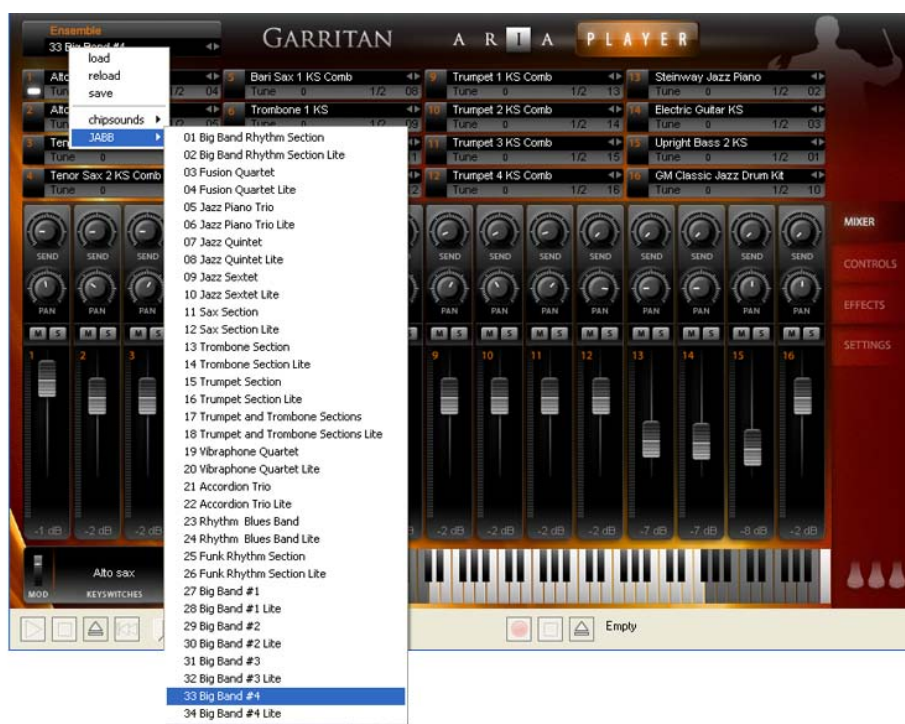
Note:

In Standalone mode you can create customized ensemble files. Just load the instruments you want, adjust their settings to your liking, and use the Save As command from the File menu to save the .aria preset.

List of Instruments in Garritan Jazz & Big Band

SAXES & WOODWIND INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
CLARINETS:		
Bass Clarinet	The Bass Clarinet plays one octave lower than the conventional clarinet.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Bb Clarinet 1	Buffet R-13 wood clarinet; 1st Player.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Bb Clarinet 2	Buffet clarinet; 2nd Player.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Bb Clarinet 3	Buffet clarinet; 3rd Player.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth

SAXES & WOODWIND INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
FLUTES:		
Alto Flute	Armstrong Alto Flute, circa 1970.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Flute 1	C Flute; made by Muramatsu. 1st Player.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Flute 2	C Flute; 2nd Player.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Flute 3	C Flute; 3rd Player.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Piccolo	Yamaha ebony piccolo, circa 1970.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth

SAXES & WOODWIND INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
SAXOPHONES:		
Alto Sax 1	Eb Alto saxophone; made by Buffet.	MW; Vel; Tng/Slr; AutoLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Alto Sax 2	Eb Alto saxophone; made by Selmer, Balanced Action.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Alto Sax 3	Eb Alto saxophone; made by Selmer, Mark VI.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Bari Sax 1	Baritone saxophone; made by Bundy.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Bari Sax 2	Baritone saxophone; made by Bundy; uses different microphones than Bari Sax 1.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Bass Sax 1	BBb Bass Saxophone; made by Selmer.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Bass Sax 2	BBb Bass Saxophone; made by Selmer; uses different microphones than Bass Sax 1.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
C Melody Sax 1	C Melody saxophone; made by Buescher.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
C Melody Sax 2	C Melody saxophone; made by Buescher, uses different microphones than C Melody Sax 1.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Contrabass Sax 1	EEb Contrabass Saxophone; made by Orsi.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Contrabass Sax 2	EEb Contrabass Saxophone; made by Orsi; different microphones than Contrabass Sax 1.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth

SAXES & WOODWIND INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
Mezzo Soprano Sax	F Mezzo-soprano saxophone; made by Conn.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Sopranino	Eb Sopranino saxophone; made by Orsi. Smallest instrument of the saxophone family recorded for this library.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Soprano Sax 1	Bb 'Straight' Soprano saxophone; made by Conn.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Soprano Sax 2	Bb 'Curved' Soprano saxophone; made by Conn.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Subcontrabass Sax	Bb Subcontrabass saxophone, also known as the "Tubax"; custom made by Benedikt Eppelsheim.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Tenor Sax 1	Bb Tenor saxophone, made by Selmer, Mark VI.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Tenor Sax 2	Bb Tenor saxophone; made by Selmer.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Tenor Sax 3	Bb Tenor saxophone; made by Yamaha.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Tenor Sax 4	Bb Tenor saxophone; made by Selmer; a mellower sound.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth

HARMONICA:		
Harmonica	A blues harmonica.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth

THE BRASS INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
FLUGELHORNS:		
Flugelhorn 1	Flugelhorn in Bb; made by Getzen Eterna; principal instrument.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Flugelhorn 2	Flugelhorn in Bb; derived instrument.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Flugelhorn 3	Flugelhorn in Bb; derived instrument.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Flugelhorn 4	Flugelhorn in Bb; derived instrument.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Flugelhorn 5	Flugelhorn in Bb; derived instrument.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk

THE BRASS INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
TRUMPETS:		
Trumpet 1		
Trumpet 1 Open (no mute)	Trumpet in Bb with extreme range extension to the "triple high C" (concert Bb) for the open horn; made by King-Golden Flair.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 1 Straight Mute	Trumpet 1 played with the Straight mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 1 Cup Mute	Trumpet 1 played with the Cup mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 1 Harmon Mute	Trumpet 1 played with the Harmon mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 1 Bucket Mute	Trumpet 1 played with the Bucket mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 1 KS	Keyswitched combination of open and all mutes. • C2 = Trumpet 1 Open (no mute) • D2 = Straight Mute • E2 = Cup Mute • F2 = Harmon Mute • G2 = Bucket Mute	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk; KS
Trumpet 2		
Trumpet 2 Open (no mute)	Trumpet in Bb with range extension to the "double high" D (concert C); made by Calicchio.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk

THE BRASS INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
Trumpet 2 Straight Mute	Trumpet 2 played with the Straight mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 2 Cup Mute	Trumpet 2 played with the Cup mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 2 Harmon Mute	Trumpet 2 played with the Harmon mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 2 Bucket Mute	Trumpet 2 played with the Bucket mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 2 KS	Keyswitched combination of open and all mutes. • C2 = Trumpet 2 Open (no mute) • D2 = Straight Mute • E2 = Cup Mute • F2 = Harmon Mute • G2 = Bucket Mute	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk; KS
Trumpet 3		
Trumpet 3 Open (no mute)	Trumpet in Bb with range extension to the "double high" D (concert C); made by Bach.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 3 Straight Mute	Trumpet 3 played with the Straight mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 3 Cup Mute	Trumpet 3 played with the Cup mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 3 Harmon Mute	Trumpet 3 played with the Harmon mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk

THE BRASS INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
Trumpet 3 Bucket Mute	Trumpet 3 played with the Bucket mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 3 KS	Keyswitched combination of open and all mutes. • C2 = Trumpet 3 Open (no mute) • D2 = Straight Mute • E2 = Cup Mute • F2 = Harmon Mute • G2 = Bucket Mute	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk; KS
Trumpet 4		
Trumpet 4 Open (no mute)	Trumpet in Bb with range extension to the "double high D" (concert C); made by King-Golden Flair.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 4 Straight Mute	Trumpet 4 played with the Straight mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 4 Cup Mute	Trumpet 4 played with the Cup mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 4 Harmon Mute	Trumpet 4 played with the Harmon mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 4 Bucket Mute	Trumpet 4 played with the Bucket mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 4 KS	Keyswitched combination of open and all mutes. • C2 = Trumpet 4 Open (no mute) • D2 = Straight Mute • E2 = Cup Mute • F2 = Harmon Mute • G2 = Bucket Mute	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk; KS

THE BRASS INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
Trumpet 5		
Trumpet 5 Open (no mute)	Trumpet in Bb with range extension to the "double high D" (concert C); made by King-Golden Flair.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 5 Straight Mute	Trumpet 5 played with the Straight mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 5 Cup Mute	Trumpet 5 played with the Cup mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 5 Harmon Mute	Trumpet 5 played with the Harmon mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 5 Bucket Mute	Trumpet 5 played with the Bucket mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trumpet 5 KS	Keyswitched combination of open and all mutes. • C2 = Trumpet 5 Open (no mute) • D2 = Straight Mute • E2 = Cup Mute • F2 = Harmon Mute • G2 = Bucket Mute	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk; KS
Trumpet Plunger	Uses less memory than main KS instrument.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk; KS
Trumpet Plunger Mute	Features playable open/closed plunger. Separate shake layer not present.	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Trumpet Plunger + Str Mute	Features two mutes – a playable open/close plunger over a straight mute	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth

THE BRASS INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
TROMBONES:		
Bass Trombone		
Bass Trombone Open (no mute)	Conn Bass Trombone. Range extends one octave lower than a conventional trombone.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Bass Trombone Straight Mute	Bass Trombone played with the Straight mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Bass Trombone Cup Mute	Bass Trombone played with the Cup mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Bass Trombone Harmon Mute	Bass Trombone played with the Harmon mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Bass TTrombone Bucket Mute	Bass Trombone played with the Bucket mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Bass Trombone KS	Keyswitched combination of open and all mutes. • C0 = Bass Trombone Open (no mute) • D0 = Straight Mute • E0 = Cup Mute • F0 = Harmon Mute • G0 = Bucket Mute	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk; KS
Trombone 1		
Trombone 1 Open (no mute)	Trombone; made by Holton.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk

THE BRASS INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
Trombone 1 Straight Mute	Trombone 1 played with the Straight mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 1 Cup Mute	Trombone 1 played with the Cup mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 1 Harmon Mute	Trombone 1 played with the Harmon mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 1 Bucket Mute	Trombone 1 played with the Bucket mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 1 KS	Keyswitched combination of open and all mutes. • C1 = Trombone 1 Open (no mute) • D1 = Straight Mute • E1 = Cup Mute • F1 = Harmon Mute • G1 = Bucket Mute	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk; KS
Trombone 2		
Trombone 2 Open (no mute)	Trombone; made by Holton.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 2 Straight Mute	Trombone 2 played with the Straight mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 2 Cup Mute	Trombone 2 played with the Cup mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 2 Harmon Mute	Trombone 2 played with the Harmon mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk

THE BRASS INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
Trombone 2 Bucket Mute	Trombone 2 played with the Bucket mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 2 KS	Keyswitched combination of open and all mutes. • C1 = Trombone 2 Open (no mute) • D1 = Straight Mute • E1 = Cup Mute • F1 = Harmon Mute • G1 = Bucket Mute	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk; KS
Trombone 3		
Trombone 3 Open (no mute)	Trombone; made by Holton.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 3 Straight Mute	Trombone 3 played with the Straight mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 3 Cup Mute	Trombone 3 played with the Cup mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 3 Harmon Mute	Trombone 3 played with the Harmon mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 3 Bucket Mute	Trombone 3 played with the Bucket mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 3 KS	Keyswitched combination of open and all mutes. • C1 = Trombone 3 Open (no mute) • D1 = Straight Mute • E1 = Cup Mute • F1 = Harmon Mute • G1 = Bucket Mute	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk; KS

THE BRASS INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
Trombone 4		
Trombone 4 Open (no mute)	Mellower tone and more extended range. Good for solo work.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 4 Straight Mute	Trombone 4 played with the Straight mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 4 Cup Mute	Trombone 4 played with the Cup mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 4 Harmon Mute	Trombone 4 played with the Harmon mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 4 Bucket Mute	Trombone 4 played with the Bucket mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 4 KS	Keyswitched combination of open and all mutes. • C1 = Trombone 4 Open (no mute) • D1 = Straight Mute • E1 = Cup Mute • F1 = Harmon Mute • G1 = Bucket Mute	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk; KS
Trombone 5		
Trombone 5 Open (no mute)	Trombone 5, made by Edwards, .500 bore.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 5 Straight Mute	Trombone 5 played with the Straight mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 5 Cup Mute	Trombone 5 played with the Cup mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk

THE BRASS INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
Trombone 5 Harmon Mute	Trombone 5 played with the Harmon mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 5 Bucket Mute	Trombone 5 played with the Bucket mute.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk
Trombone 5 KS	Keyswitched combination of open and all mutes. • C1 = Trombone 5 Open (no mute) • D1 = Straight Mute • E1 = Cup Mute • F1 = Harmon Mute • G1 = Bucket Mute	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk; KS
Trombone Plunger		
Trombone Plunger Mute	Features playable open/closed plunger.	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Plgr
Trombone Plunger + Str Mute	Features two mutes – a playable open/closed plunger over a straight mute	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth

TUBA		
Tuba	BBb Tuba	MW; Vel; Tng/Slr; AutLeg; AF; KC; RFX; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth; Sk

THE RHYTHM SECTION INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
GUITARS:		
Acoustic Guitar KS	Oribe nylon 10-string guitar, 1971; range extends down to the "A" below the traditional "E." Additional open strings are included. • C1 = Plucked • C#1 = Open Strings • D1 = Harmonics	Vel (vol); Port; Lgth; VAR 1; VAR 2
Electric Guitar KS	Gibson ES-175 Handcrafted Electric Guitar. This model is regarded as one of the most popular guitars of the jazz world. • C1 = Plucked • C#1 = Open Strings • D1 = Harmonics	Vel (vol); Port; Lgth; VAR 1; VAR 2
Electric Guitar Mellow KS	A mellower Electric Guitar for a classic jazz sound. • C1 = Plucked • C#1 = Open Strings • D1 = Harmonics	Vel (vol); Port; Lgth; VAR 1; VAR 2
Banjo	A standard banjo for Dixieland and smaller jazz groups.	Vel (vol); Port; Lgth; VAR 1; VAR 2

THE RHYTHM SECTION INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
KEYBOARD & VIBRAPHONE INSTRUMENTS:		
Accordion	Petosa jazz accordion, right hand keyboard plus one octave of bass keys.	Vel (vol); Bl
Steinway Jazz Piano	Steinway Model B Grand Piano, chromatic with 2 dynamics.	At; Vel (vol); Sus (sus); TQ
Vintage Electric Piano	Fender Rhodes, circa 1970s, suitcase model with stereo tremolo speakers in the base.	At; Vel (vol); Sus (sus); Trm; TQ
Vibraphone Hard Mallet	Yamaha Vibraphone played with custom made hard beaters.	At; Vel (vol); Sus (sus); Trm; TQ
Vibraphone Soft Mallet	Yamaha Vibraphone played with Jackson soft beaters.	At; Vel (vol); Sus (sus); Trm; TQ
Vibraphone KS	Vibraphone ksyswitched between hard and soft mallets • C2 = Hard Mallets • D1 = Soft Mallets	At; Vel (vol); Sus (sus); Trm; TQ
Organ 1	A vintage drawbar organ.	At; MW(vol); Sus (sus); Trm; TQ
Organ 2	A percussive organ	At; MW(vol); Sus (sus); Trm; TQ
Organ 3	A rock organ	At; MW(vol); Sus (sus); Trm; TQ
Organ 4	A rock organ	At; MW(vol); Sus (sus); Trm; TQ
Organ 5	A drawbar organ	At; MW(vol); Sus (sus); Trm; TQ
Organ 6	A percussive organ	At; MW(vol); Sus (sus); Trm; TQ
Organ 7	A stacked vintage drawbar percussive organ most useful for jazz applications	At; MW(vol); Sus (sus); Trm; TQ

THE RHYTHM SECTION INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
BASS INSTRUMENTS:		
Fretless Bass 1 KS	G&L L1000 fretless electric bass. • C0 = Plucked • D0 = Harmonics	Vel (vol); Port; Lgth; Vib; VAR 1; VAR 2
Fretless Bass 2 KS	Fretless electric bass, circa 1972. • C0 = Plucked • D0 = Harmonics	Vel (vol); Port; Lgth; Vib; VAR 1; VAR 2
Jazz Fretted Bass 1 KS	Fender Fretted electric bass with flat wound strings. • C0 = Plucked • D0 = Harmonics	Vel (vol); Port; Lgth; Vib; VAR 1; VAR 2
Jazz Fretted Bass 2 KS	G&L 2000 Fretted jazz electric bass. • C0 = Plucked • D0 = Harmonics	Vel (vol); Port; Lgth; Vib; VAR 1; VAR 2
Upright Bass 1 KS	Upright acoustic bass, standard "walking" plucks; made by Hammond-Ashley. • C0 = Plucked • C#0 = Open Strings	Vel (vol); Port; Lgth; Vib; VAR 1; VAR 2
Upright Bass 2 KS	Chuck Israels' French Mirecourt upright acoustic bass, circa 1880s, standard "walking" plucks. • C0 = Plucked • C#0 = Open Strings	Vel (vol); Port; Lgth; VAR 1; VAR 2
Upright Bass 2 Arco KS	Chuck Israels' upright acoustic bass played in arco style with a bow. • C0 = Sustain • D0 = Auto Alternate • G0 = Tremolo	Vel (vol); Port; Lgth; Vib; VAR 1; VAR 2
Slap Bass 1	A slap bass provides a strong percussive sound when the string is plucked and slaps back onto the fingerboard of the instrument.	Vel (vol); Port; Lgth; Vib; VAR 1; VAR 2
Slap Bass 2	A different slap bass variation.	Vel (vol); Port; Lgth; Vib; VAR 1; VAR 2

THE RHYTHM SECTION INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
PERCUSSION INSTRUMENTS:		
Brushes:		
01 Brush Drum Kit	Wire brushes, snare #1; combines bass drum, snare, toms, hi-hats, and cymbals into a single instrument.	Vel (vol); Brsh; VAR 1; VAR 2
02 Brush Drum Kit	Wire brushes, snare #2; combines bass drum, snare, toms, hi-hats, and cymbals into a single instrument.	Vel (vol); Brsh; VAR 1; VAR 2
Brush Cymbals	Wire brush hits on the various cymbals in the brush kit.	Vel (vol); VAR 1; VAR 2
Brush HiHat	Wire brush hits on 15" high-hat hits; A Zildjian on top and Paiste on bottom.	Vel (vol); VAR 1; VAR 2
Brush Snare Drum 1	Wire brush stirs and hits on a Yamaha 4x14" maple snare drum.	Vel (vol); Brsh; VAR 1; VAR 2
Brush Snare Drum 2	Wire brush stirs and hits on a Gretsch 5x14" maple snare drum.	Vel (vol); Brsh; VAR 1; VAR 2
Brush Toms	Wire brush hits on Gretsch tom toms; 16 x 16" floor tom, 9 x 13" rack tom, 8 x 12" rack tom; Remo coated heads.	Vel (vol); VAR 1; VAR 2
Sgl-layr-hd Bass Drum	Bass drum hits from the classic kit; 20" x 14" Gretsch with various heads.	Vel (vol); VAR 1; VAR 2
Sticks:		
Classic Jazz Drum Kit:		
03 Classic Jz Drum Kit	Single layer heads for snare, toms, and kick. Does not use General MIDI mapping on all notes.	Vel (vol); VAR 1; VAR 2
14inHiHat2	14" high-hat hits.	Vel (vol); VAR 1; VAR 2
15inHiHat	15" high-hat hits; A Zildjian on top and Paiste on bottom.	Vel (vol); VAR 1; VAR 2
Cymbals	Selection of ride, crash, splash cymbals and some unusual additions like garbage can lids and saw blades. See Appendix B.	Vel (vol); VAR 1; VAR 2
Sgl-layr-hd Bass Drum	Bass drum hits from the classic kit; 20" x 14" Gretsch with various heads.	Vel (vol); VAR 1; VAR 2
Sgl-layr-hd Piccolo Snare	Smaller higher pitched snare hits.	Vel (vol); VAR 1; VAR 2

THE RHYTHM SECTION INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
Sgl-layr-hd Snare	Hits on the classic jazz kit snare drum; Ludwig 5 x 14" snare with Remo Renaissance Diplomat head.	Vel (vol); VAR 1; VAR 2
Sgl-layr-hd Toms	Hits on the classic kit toms; 16 x 16" Gretsch floor tom, 9 x 13" Gretsch rack tom, 8 x 12" Gretsch rack tom, Remo coated heads.	Vel (vol); VAR 1; VAR 2
Fusion Drum Kit:		
04 Fusion Drum Kit	Double Layer heads for snare, toms, and kick. Does not use General MIDI mapping on all notes.	Vel (vol); VAR 1; VAR 2
14inHiHat1	14" high-hat hits; A Zildjian Newbeats.	Vel (vol); VAR 1; VAR 2
Cymbals	Selection of ride, crash, splash cymbals and some unusual additions like garbage can lids and saw blades. See Appendix B.	Vel (vol); VAR 1; VAR 2
Cymbals Lite	Contains primary cymbal choices.	Vel (vol); VAR 1; VAR 2
Dbl-layr-hd Bass Drum	Bass drum hits from the 14 x 22" Gretsch with various heads and pillow muffles.	Vel (vol); VAR 1; VAR 2
Dbl-layr-hd Piccolo Snare	Smaller higher pitched snare hits.	Vel (vol); VAR 1; VAR 2
Dbl-layr-hd Snare	Hits on the Ludwig 5 x 14" snare with Remo pinstripe head.	Vel (vol); VAR 1; VAR 2
Dbl-layr-hd Toms	Hits on Gretsch fusion kit toms; 16 x 16" floor tom, 9 x 13" rack tom, 8 x 12" rack tom; Remo Pinstripe heads.	Vel (vol); VAR 1; VAR 2
GM Drum Kits (General Midi)		
GM Classic Jazz Drum Kit	General MIDI layout using Classic Jazz Kit sounds in the first octave and a half.	Vel (vol); VAR 1; VAR 2
GM Brush Drum Kit	General MIDI layout using the Brush Drum Kit.	Vel (vol); VAR 1; VAR 2
GM Fusion Drum Kit	General MIDI layout using Fusion Drum Kit sounds in the first octave and a half.	Vel (vol); VAR 1; VAR 2
Percussion:		
01 Drums:		
Bata	Bata drums are double-headed drums from Cuba.	Vel (vol); VAR 1; VAR 2
Bongos	A set of two small connected drums typically held between the knees and played with the fingers.	Vel (vol); VAR 1; VAR 2
Cajones	Cajones are a wooden hollow box-like instrument used in Andean, Cuban, and Flamenco music.	Vel (vol); VAR 1; VAR 2

THE RHYTHM SECTION INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
Conga	The most important hand drum in Latin music. A tall narrow single-headed drum usually grouped in sets of varying sizes.	Vel (vol); VAR 1; VAR 2
Cuica	A Brazilian friction drum. Sound is produced by rubbing a small stick on the drum's inside membrane.	Vel (vol); VAR 1; VAR 2
Djembe	A goat skin covered drum shaped like a large goblet and played with bare hands.	Vel (vol); VAR 1; VAR 2
Pandeiro	A small hand-held Brazilian instrument consisting of a round wooden frame, with six pairs of metal discs fit along the sides.	Vel (vol); VAR 1; VAR 2
Quinto	A smaller conga drum primarily used for soloing.	Vel (vol); VAR 1; VAR 2
Super Tumba	The largest of the conga drums.	Vel (vol); VAR 1; VAR 2
Surdu	Large cylindrical drums with two heads typically played with a large mallet while the free hand muffles the drum.	Vel (vol); VAR 1; VAR 2
The Box	A custom instrument consisting of a wooden box struck in various ways.	Vel (vol); VAR 1; VAR 2
Timbales	A set of two open-bottomed metal drums mounted side by side on a metal stand and played with wooden sticks.	Vel (vol); VAR 1; VAR 2
Tumba	A large conga drum with a rich low tone often used in Cuban music.	Vel (vol); VAR 1; VAR 2
Udu	A percussion instrument made of clay that possesses distinct tonal qualities which range from subtle bass tones to tabla-like tones.	Vel (vol); VAR 1; VAR 2
02. Gourds:		
Cabasa	An instrument consisting of loops of steel ball chains wrapped around a wide cylinder that produces rhythmic scraping sounds.	Vel (vol); VAR 1; VAR 2
Guira	An instrument made out of metal that is cylindrical in shape with many small round indentations.	Vel (vol); VAR 1; VAR 2
Guiro	A Latin percussion instrument made of a hollow gourd with a grooved or serrated surface, played by scraping with a stick.	Vel (vol); VAR 1; VAR 2
Maracas	A Latin percussion instrument consisting of a hollow-gourd rattle containing pebbles or beans and often played in pairs.	Vel (vol); VAR 1; VAR 2

THE RHYTHM SECTION INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
Shakers	Calabash gourds strung with beads, used for percussion.	Vel (vol); VAR 1; VAR 2
Shekere	A hand shaker consisting of a hollowed small gourd with shells or beads attached to it	Vel (vol); VAR 1; VAR 2
03 Blocks:		
Clave	A percussion instrument, consisting of a pair of short, thick wooden dowels hit together to produce a high-pitched sound.	Vel (vol); VAR 1; VAR 2
Jam Block	A modern version of wood blocks made of plastic rather than wood.	Vel (vol); VAR 1; VAR 2
Woodblock	A hollow block of wood struck with a stick to produce percussive sounds.	Vel (vol); VAR 1; VAR 2
04 Bells:		
Agogo Bells	A multi-chambered steel instrument that is beaten like a cow bell and frequently heard in samba and salsa music.	Vel (vol); VAR 1; VAR 2
Bongo Bells	A large handheld bell also called a campana.	Vel (vol); VAR 1; VAR 2
Cha Cha Bells	The small bell often mounted on the timbales. Typically associated with Cha-Cha and Salsa style music.	Vel (vol); VAR 1; VAR 2
Timbale Bell	Oblong bells specially designed to be mounted on your timbales. Hand tuned from Middle C to the 4th an octave above.	Vel (vol); VAR 1; VAR 2
05 Misc Percussion:		
Castanets	A pair of hollow pieces of wood usually held between the thumb and fingers that produce a clicking sound.	Vel (vol); VAR 1; VAR 2
Handclaps - Fingersnaps	The clapping together of the hands and the snapping of fingers.	Vel (vol); VAR 1; VAR 2
Jawbone	The jawbone of an animal used as a percussion instrument that when struck, the teeth rattle.	Vel (vol); VAR 1; VAR 2
Rainstick	A percussion instrument consisting of a hollow tube filled with small pebbles that make the sound similar to falling rain.	Vel (vol); VAR 1; VAR 2
Tambourine	An instrument consisting of a small drumhead with metal discs in the rim, usually played by shaking and striking with the hand.	Vel (vol); VAR 1; VAR 2

THE RHYTHM SECTION INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
Triangles	Percussion instruments consisting of a piece of metal in the shape of a triangle open at one angle.	Vel (vol); VAR 1; VAR 2
Whistles	Small wind instruments for making whistling sounds.	Vel (vol); VAR 1; VAR 2

KEYSWITCH (KS) COMBINATION INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
KEYSWITCH (KS) COMBINATIONS		
Alto Sax 1 KS Comb	Eb Alto saxophone; made by Buffet • C2 = Alto Sax 1 • D2 = Flute • E2 = Clarinet • F2 = Soprano Sax	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Alto Sax 2 KS Comb	Eb Alto saxophone; made by Selmer, Balanced Action. • C2 = Alto Sax 2 • D2 = Flute • E2 = Clarinet • F2 = Soprano Sax	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Bari Sax 1 KS Comb	Baritone saxophone; made by Bundy. • C2 = Bari Sax 1 • D2 = Alto Flute • E2 = Bass Clarinet	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Bari Sax 2 KS Comb	Baritone saxophone; different microphones than Bari Sax 1. • C2 = Bari Sax 2 • D2 = Alto Flute • E2 = Bass Clarinet	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Tenor Sax 1 KS Comb	Bb Tenor saxophone, made by Selmer Mark VI • C2 = Tenor Sax 1 • D2 = Flute • E2 = Clarinet • F2 = Soprano Sax	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Tenor Sax 2 KS Comb	Bb Tenor saxophone; made by Selmer. • C2 = Tenor Sax 2 • D2 = Flute • E2 = Clarinet • F2 = Soprano Sax	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Tenor Sax 3 KS Comb	Bb Tenor saxophone; made by Yamaha. • C2 = Tenor Sax 3 • D2 = Flute • E2 = Clarinet • F2 = Soprano Sax	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth

KEYSWITCH (KS) COMBINATION INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
Tenor Sax 4 KS Comb	Bb Tenor saxophone; made by Selmer; a mellower sound. • C2 = Tenor Sax 4 • D2 = Flute • E2 = Clarinet • F2 = Soprano Sax	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Bass Trombone KS Comb	Bass Trombone - tuba • C2 = Open • D2 = Straight mute • E2 = Cup mute • F2 = Harmon mute • G2 = Bucket mute • A2 = Tuba	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Trumpet 1 KS Comb	Trumpet 1 – flugelhorn • C2 = Open • D2 = Straight mute • E2 = Cup mute • F2 = Harmon mute • G2 = Bucket mute • A2 = Flugelhorn	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Trumpet 2 KS Comb	Trumpet 2 – flugelhorn • C2 = Open • D2 = Straight mute • E2 = Cup mute • F2 = Harmon mute • G2 = Bucket mute • A2 = Flugelhorn	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Trumpet 3 KS Comb	Trumpet 3 – flugelhorn • C2 = Open • D2 = Straight mute • E2 = Cup mute • F2 = Harmon mute • G2 = Bucket mute • A2 = Flugelhorn	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Trumpet 4 KS Comb	Trumpet 4 – flugelhorn • C2 = Open • D2 = Straight mute • E2 = Cup mute • F2 = Harmon mute • G2 = Bucket mute • A2 = Flugelhorn	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth

KEYSWITCH (KS) COMBINATION INSTRUMENTS		
ARIA Instrument name:	**Description:**	**Controls:**
Trumpet 5 KS Comb	Trumpet 5 – flugelhorn • C2 = Open • D2 = Straight mute • E2 = Cup mute • F2 = Harmon mute • G2 = Bucket mute • A2 = Flugelhorn	MW; Vel; Tng/Slr; AutLeg; AF; KC; Vib; Fltr/Grl; PBd; Port; Lgth; VAR 1; VAR 2; TQ; Brth
Keyboards KS Comb	All keyboards * • C2 = Steinway Piano • D2 = Vintage Electric Piano • E2 = Organ • F2 = Accordion	At; Vel (vol) except organ; MW (vol) for organ only; Sus (sus); TQ; Trm (for VEP and organ)
Guitars KS Comb	All guitars * • C1 = Acoustic Guitar • D1 = Electric Guitar • E1 = Electric Guitar mellow • F1 = Banjo	Vel (vol); Port; Lgth; Vib; VAR 1; VAR 2
Basses KS Comb	All basses * • C0 = Fretless 1 • C#0 = Fretless 2 • D0 = Fretted 1 • D#0 = Fretted 2 • E0 = Slap 1 • F0 = Slap 2 • F#0 = Upright 1 • G0 = Upright 2	Vel (vol); Port; Lgth; Vib; VAR 1; VAR 2

Note: #1: Guitars and basses contain only the basic pluck sounds as a necessary concession to possible programming conflicts between instruments within the combination. These combinations are primarily intended as a convenience for use with programs like Band-In-A-Box that only allow loading one instance of ARIA.

Note: #2: Not all controllers displayed on the controls page of combination instruments apply to every instrument in the combination. e.g. "Keyboards KS Comb" has knobs for tremolo that do not apply to the piano or accordion.

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Learn, Share Music & Stay up to date

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The Garritan Forum is where Garritan users from around the world come to discuss everything related to soundware and music. It's the perfect way to find the latest news and announcements, ask questions, and share your music made with the Garritan Jazz & Big Band. If you want to browse, share your music, share your thoughts about the sounds, impart knowledge, listen to demos, learn, and interact with other users—this is the place! You can also communicate privately with other musicians, respond to polls, participate in real-time chats, read how-to tutorials, and get support and help from others. There is a wealth of information among the tens of thousands of posts in the forum and a convenient 'search' feature to find exactly what you are looking for.

The Garritan forum can be accessed at: **http://www.garritan.com/forum.html.** There is a special subsection dealing with Jazz & Big Band on the Garritan forums.

You do not have to register to browse posts, but before you can post, you will have to sign up. Registration is fast, simple and absolutely free so please, join our community today! In addition to the official Garritan Forum, there are other independent Garritan Communities where you can find valuable information and interact with other users. I urge you to contribute and be a part of the Garritan Community where you will find an indispensable resource for musicians.

Getting Help

The first place to look for a solution to any problem you may be experiencing is in this manual. Please read the manual before contacting support. Next, check the readme files (if any) which contain important information and all last-minute changes that did not make it into this guide.

Whenever you encounter problems, you should also check if you have installed the latest updates. The version number of your software is displayed in the "Settings" tab. Updates are released regularly to fix known problems and to improve the software.

Select the Support button in the Settings window to link directly to the Garritan Support site. You will be asked for information about your hardware and software environment, to better assist you. In your description, you should include a description of the problem, or steps to reproduce it, the steps you have taken to try to remedy the problem, the specs of your computer, and a description of your software and hardware.

If you can't find a solution to your problem by any of the above methods, please go to the support section of our website at **www.garritan.com**. The best way to get the help you need is by giving us plenty of detailed information about the problem you are having. We do ask you to read this guide thoroughly and exhaust the other avenues of support before contacting us.

> **Regarding Third-Party Customer Service:** Please do not call Garritan for technical support regarding any other third-party application or program. Please contact the respective companies for support.

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Acknowledgements

Appendix A:
Quick MIDI Controller Reference Guide

CC #	DESCRIPTION	USE	INSTRUMENTS AFFECTED
1	Modulation	Controls the volume/ timbre of "Expressive" instruments.	All "Expressive" sustained instruments. Does not affect most percussion instruments.
2	Breath	Alternate controller for volume/ timbre of "Expressive" instruments.	All "Expressive" sustained instruments. Does not affect most percussion instruments.
7	MIDI Volume	Turned on by default. Volume controller cc7 used for static volume changes (in contrast to modulation control cc1 which is used for dynamic volume/timbre changes).	All if chosen.
10	MIDI Pan	Turned on by default. Most instruments in JABB have suggested "start" positions for panning.	All if chosen.
11	Expression	Alternate controller for volume/ timbre of "Expressive" instruments.	All "Expressive" sustained instruments. Does not affect most percussive instruments.
12	Air flow noise	Turned off by default. Can be used to add breathiness to the sound of an instrument.	Air flow noise is included with all woodwind and brass instruments. Also bellows noise in accordion.
	Fundamental (basses)	Strength of fundamental in tone.	All basses.
13	Key click/ valve noise	Can be used to add mechanical noises synchronized to note changes.	Supplies key click noises in the woodwinds, valve noises in the trumpets/tuba, and finger noise in basses.
15	Note release effects	Turned off by default. Uses value splits to switch between falloffs, doits, and kisses.	All trumpets.
16	Plunger mute control	At "closed" setting by default.	Two trumpets and two trombones.
17	Vibrato Speed Control	Used along with Aftertouch (vibrato intensity) to control the application of vibrato.	Woodwinds, brass, bass, and guitar.
18	Flutter tongue/growl	Roughens tone quality.	Wind instruments.

CC #	DESCRIPTION	USE	INSTRUMENTS AFFECTED
19	Pitchbend disable	Turned off by default. Switches to a layer that does not respond to pitchbend. Allows the user to apply pitchbend to selected overlapping notes only.	All "expressive" sustaining instruments.
20	Portamento	Adds portamento to notes depending on interval and controller data added.	All "Expressive" sustained instruments. Used during legato/slurred passages which require portamento.
	Attack Speed (vibraphone only)	Continually adjustable attack speed controller. Adjustable from hard to 'bowed' attacks. Defaults to hard attacks	Adjustable attack speed controller on the vibraphone KS patch.
	Brightness	High frequency control	Piano.
	Kick drum level	Volume	Drum kits.
21	Length	Controls the length/release time of the sample.	Controls the length/release time of most instruments in JABB.
	Snare Drum Level	Volume	Drum kits.
22	Variability 1 (VAR 1)	Sets random variations in tuning from note to note.	Most wind and some percussion instruments. Useful for repeated note passages to prevent the 'machine gun' effect.
	Tremolo Level (vibraphone and vintage E Piano)	Variable tremolo intensity.	Vibraphone and vintage electric piano. To be used with CC#23.
23	Variability 2 (VAR 2)	Sets random variations in instrument timbre from note to note.	Most wind and some percussion instruments. Useful for repeated note passages to prevent the 'machine gun' effect.
	Tremolo Speed (vibraphone and vintage E Piano)	Variable tremolo speed.	Vibraphone and vintage electric piano. To be used with CC#22.
24	High Frequency EQ (vibraphone)	Controls brightness.	Vibraphones.
	Tom Tom level	Volume	Drum kits
25	Hi-hat level	Volume	Drum kits
26	Filter level	Intensity of EQ	Many wind instruments.
	Mid EQ	Intensity of mid EQ	Vintage electric piano
	Cymbal level	Volume	Drum kits

CC #	DESCRIPTION	USE	INSTRUMENTS AFFECTED
27	Filter Center Frequency Filtering (organ)	Chooses the part of the audio spectrum modified by the Tone Control.	Many wind instruments.
	Percussion level	Volume.	Drum kits.
28	High Frequency Control	Intensity of high frequencies.	Many wind instruments and vintage electric piano.
	Attack control	Special attack control for the brass shake layer	Trumpets and trombones.
64	Tongue/slur and sustain(standard folders)	Controls tongue/slur and standard Sustain.	Tongue/slur function for wind instruments; Standard sustain for keyboards, basses, and Guitars.
68	Tongue/Slur Notation folder only)		All wind instruments.
After-touch	Vibrato Intensity Controller	Controls vibrato intensity.	All wind instruments.
	Brush stir direction change	Controls the direction change in brush pattern. Defines the rhythmic character of the stir.	Brush Snare Drums.
Velocity	Velocity	Controls "note on" velocity for all instruments in JABB.	Controls the initial attack strength of all "Expressive" mod wheel controlled instruments in JABB. For all "Percussive" (keyed, percussion, or non-sustained patches) this controls volume/timbre.
Pitch Bend	Pitch Bend	Allows a note's pitch to be shifted in a controlled manner (usually to a maximum of two semitones up or down).	This controller is useful for instruments like strings and trombone where note slides are common. This controller is used to create 'scoops' or 'drops' at the beginning or end of a note or passage. Can be used with trombone to simulate slide movements during sustained notes. Can be used along with CC#19 to solve difficult portamento situations.

Appendix B:
Drum Maps

			DRUM MAPS		

MIDI Note #	Note Name	General MIDI Drum Kits	Classic Jazz/ Fusion Drum Kits	Brush Drum Kit
34	A#		Side Stick	
35	B	Bass Drum 1	Bass Drum 1	Bass Drum 1
36	C	Bass Drum 2	Bass Drum 2	Bass Drum 2
37	C#	Side Stick	Rim Shot	Snare Stir Aftertouch -direction change)
38	D	Snare 1	Snare LH	Snare LH
39	D#	Hand Clap	Snare RH	Snare RH
40	E	Snare 2	Foot Closed Hi Hat	Foot Closed Hi Hat
41	F	Low Floor Tom	Low Floor Tom	Low Tom
42	F#	Closed Hi Hat	Closed Hi-hat LH	Closed Hi-hat LH
43	G	High Floor Tom	Closed Hi-hat RH	Closed Hi-hat RH
44	G#	Pedal Hi Hat	Half Open Hi-hat	Half Open Hi-hat
45	A	Low Tom	Mid Tom	Mid Tom
46	A#	Open Hi Hat	Open Hi-hat	Open Hi-hat
47	B	Low-mid Tom	Hi Hat Crash	
48	C	High-mid Tom	High Tom	High Tom
49	C#	Crash Cymbal 1	Crash Cymbal 1	Crash Cymbal
50	D	High Tom	Ride Cymbal 1	Ride Cymbal 1
51	D#	Ride Cymbal 1	Ride Cymbal 2	Ride Cymbal 2
52	E	Chinese Cymbal	Crash Cymbal 2	Sizzle Cymbal
53	F	Ride Bell	Ride Bell 1	Garbage Can Lid (wire brush)
54	F#	Tambourine	Ride Bell 2	Garbage Can Lid (brush handle)
55	G	Splash Cymbal	Ride Cymbal 3	Garbage Can Lid (blastick)
56	G#	Cowbell	Crash Cymbal 3	
57	A	Crash Cymbal 2	Sizzle Cymbal 1	
58	A#	Vibraslap	Stagg Crash Cymbal 4	

DRUM MAPS				
MIDI Note #	**Note Name**	**General MIDI Drum Kits**	**Classic Jazz/ Fusion Drum Kits**	**Brush Drum Kit**
59	B	Ride Cymbal 2	Cracked Ride Cymbal 3	
60	C	High Bongo	China Cymbal	
61	C#	Low Bongo	Splash Cymbal	
62	D	Mute High Bongo	Ride Cymbal 4	
63	D#	Open High Bongo	Crash Cymbal 5	
64	E	Low Conga	Sizzle Cymbal 2 (wood tip)	
65	F	High Timbale	Sizzle Cymbal 2 (nylon tip)	
66	F#	Low Timbale	Sizzle Cymbal 2 (mallet)	
67	G	High Agogo	Sizzle Cymbal 2 (finger)	
68	G#	Low Agogo	Sizzle Cymbal 2 (wood tip BS)	
69	A	Cabasa	Cymbal Scrape 1	
70	A#	Maracas	Cymbal Scrape 2	
71	B	Short Whistle	Cymbal Scrape 3	
72	C	Long Whistle	Cymbal Scrape 4	
73	C#	Short Guiro	Cymbal Scrape 5	
74	D	Long Guiro	Garbage Can Lid (stick)	
75	D#	Claves	Garbage Can Lid (mallet)	
76	E	High Wood Block	Garbage Can Lid (hard mallet)	
77	F	Low Wood Block	Garbage Can Lid (rubber mallet)	
78	F#	Mute Cuica	Garbage Can Lid (car keys)	
79	G	Open Cuica	Garbage Can Lid (hand)	
80	G#	Mute Triangle	Radial Saw Blade	
81	A	Open Triangle	Chrome Saw Blade	

Appendix C:
Percussion Maps

PERCUSSION MAPS			
MIDI Note #	**Note Name**	**Drums**	**Gourds, Blocks, Bells, Misc.**
36	C	Bata Low Open	Cabasa Short
37	C#	Bata Low Muff	Cabasa Long
38	D	Bata Low Slap	Cabasa Snap
39	D#	Bata Mid Open	Guira Short 1
40	E	Bata Mid Muff	Guira Short 2
41	F	Bata Mid Slap	Guira Long
42	F#	Bata High Open	Guiro 1 Short 1
43	G	Bata High Muff	Guiro 1 Short 2
44	G#	Bata High Slap	Guiro 1 Long
45	A	Bongo Low Open	Guiro 2 Short 1
46	A#	Bongo Low Muff	Guiro 2 Short 2
47	B	Bongo Low Slap	Guiro 2 Long
48	C	Bongo High Open	Maraccas 1 Short
49	C#	Bongo High Muff	Maraccas 1 Long
50	D	Bongo High Slap	Maraccas 2 Short
51	D#	Cajon Low	Maraccas 2 Long
52	E	Cajon Slap	Shaker Short 1
53	F	Cajon Stick Hit	Shaker Short 2
54	F#	Conga Low	Shaker Short 3
55	G	Conga Open	Shaker Medium
56	G#	Conga Muff	Shaker Long
57	A	Conga Slap	Shekere Low
58	A#	Cuica Low	Shekere High
59	B	Cuica Mid	Shekere Short 1
60	C	Cuica High	Shekere Short 2
61	C#	Djembe Open	Clave
62	D	Djembe Muff	Jam Block Low
63	D#	Djembe Slap	Jam Block High
64	E	Pandeiro Open	Wood Block
65	F	Pandeiro Muff	Agogo Bell Low Open

		PERCUSSION MAPS	
MIDI Note #	Note Name	Drums	Gourds, Blocks, Bells, Misc.
66	F#	Pandeiro Slap	Agogo Bell Low Mute
67	G	Quinto Open	Agogo Bell High Open
68	G#	Quinto Muff	Agogo Bell High Mute
69	A	Quinto Slap	Bongo Bell Low Open
70	A#	Super Tumba Low	Bongo Bell Low Mute
71	B	Super Tumba Open	Bongo Bell High Open
72	C	Super Tumba Muff	Bongo Bell High Mute
73	C#	Super Tumba Slap	Cha Cha Bell Open
74	D	Surdu Open	Cha Cha Bell Mute
75	D#	Surdu Muff	Timbale Bell Open
76	E	The Box Low	Timbale Bell Mute
77	F	The Box Mid	Castanets
78	F#	The Box High	Hand Claps
79	G	Timbales Low	Finger Snaps
80	G#	Timbales High	Jawbone
81	A	Timbales Edge	Rainstick 1
82	A#	Tumba Low	Rainstick 2
83	B	Tumba Open	Tambourine Short
84	C	Tumba Muff	Tambourine Long
85	C#	Tumba Slap	Tambourine Hit
86	D	Udu Long	Triangle 1 Open
87	D#	Udu Short	Triangle 1 Mute
88	E		Triangle 2 Open
89	F		Triangle 2 Mute
90	F#		Whistle 1 Short
91	G		Whistle 1 Long
92	G#		Whistle 2 Short
93	A		Whistle 2 Long
94	A#		Whistle 3 Short
95	B		Whistle 3 Medium
96	C		Whistle 3 Long

Exploring Jazz Arranging
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With Garritan Jazz & Big Band you now have a fine jazz band and big band at your fingertips. To get the best out of the library, it is important for a well-rounded musician to possess a basic knowledge of jazz arranging.

We are pleased to make available an interactive course based upon Chuck Israels' new book *"Exploring Jazz Arranging"*. Chuck Israels has worked with Billie Holiday, Benny Goodman, Coleman Hawkins, Stan Getz, Herbie Hancock, John Coltrane, and was the bassist with the Bill Evans Trio.

In this Interactive Edition interactive score excerpts are provided which allow the learner to simultaneously listen and visually follow. One of the most effective ways to learn arranging is by listening and simultaneously seeing it on the score. Live playback of the score examples imparts an added dimension, conveying concepts far more clearly and immediately than simply viewing what's on a printed page.

In the Interactive Exploring Jazz Arranging DVD that accompanies the book, we have provided exactly that facility: score excerpts which allow the learner to simultaneously listen and visually follow. There are some 130 animated scores provided in the DVD.

The ability to hear various jazz realizations of the different examples from Chuck Israels' jazz works, on-demand, is invaluable; and text alone cannot provide this level of instruction.
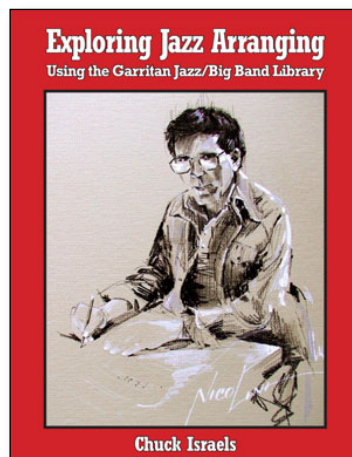
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